

# THE CULTIVATOR

[THIRD]

TO IMPROVE THE SOIL AND THE MIND

[SERIES]

VOL. XII.

ALBANY, N. Y., FEBRUARY, 1864.

No. 2.

**PUBLISHED BY LUTHER TUCKER & SON,**  
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

TERMS—SIXTY CENTS PER YEAR.—Ten copies of THE CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Six Dollars.

THE CULTIVATOR has been published thirty years. A NEW SERIES was commenced in 1853, and the eleven volumes for 1853, 4, 5, 6, 7, 8, 9, 60, 61, 62 and 63, can be furnished, bound and postpaid, at \$1.00 each—the set of 11 vols. sent per Express for \$8.25.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two volumes yearly of 416 pages, at \$2.00 per year, is issued by the same publishers.

## The Cultivator & Country Gentleman.

### Winter Feeding and Care of Sheep.

A number of inquiries as to the Winter Feeding and Care of Sheep, have accumulated on our table, and should have received earlier attention. In the following remarks we shall endeavor to answer them, so far as we are able, and should be glad to receive further information on any of the points alluded to, from those who have had experience.

A reader in Niagara county asks which is the most profitable grain to feed to a fattening flock at the following prices:

Red Wheat,...	\$1.25 per bush.	Rye,.....	\$1.05 per bush.
Barley,.....	1.25 do.	Oats,.....	.65 do.
Indian corn,.....	\$1.05 per bush.		

He has on hand these grains and can sell as above, what he does not feed. We should give the preference at these rates to Indian corn, but, as he suggests, an occasional change will be advantageous. According to the usual tables Wheat would be as cheap at about \$1.30 as Indian corn at \$1.05,—figures corresponding quite nearly with those of our correspondent, and it might not be amiss to make an experiment in its use. One common error in feeding, is not to graduate the quantity properly at the beginning. A half-pint per head of Indian corn is enough to start with, and this amount may be gradually increased, in the course of a week or ten days to a pint, and, in about three weeks, if satisfactory progress is making, to a quart each per day, which is considered a full feed for fattening sheep. The yards attached to the sheds should be somewhat roomy, and these will give sufficient exercise. It would be doubtful policy to allow a breeding flock to "roam over the fields," and quite an error with fattening sheep. From the middle to last of March we should say would be probably the best time to market the sheep.

A Baltimore, Md., subscriber asks, "in feeding Cots-

wolds, in a yard, supplied with abundant and succulent corn fodder, what quantity of bean meal per day to each sheep, should be allowed, to keep them in ordinary condition" in this season, at that latitude? Also what quantity of corn would serve the same purpose, and which would probably the cheapest and most satisfactory material, oats, corn or beans? It is our impression that feeders of sheep in this country generally regard corn and beans as about equivalent, and that a pint per day of either should keep a breeding flock of large sized sheep in good order, with the corn fodder described. If there is an advantage in the beans, either as regards feeding qualities or with reference to the quality of the manure produced, (and in the latter there is probably some advantage,) the price of beans is now relatively still higher than that of corn, and corn would therefore have the preference. Corn and beans mixed, *if both are at hand*, or an occasional change from one to the other, is good for the sheep. As between corn and oats, a mixture is again to be recommended, but if one grain alone is chosen, at present prices, it would be the former. We are not aware of any experiments showing a difference in quality of wool arising from the kind of grain fed. The market prices of the materials mentioned by our correspondent we cannot give, but will endeavor to ascertain them.

A Dutchess county subscriber inquires as to wintering a flock of 105 ewes. Two separate sheds would doubtless be preferable for the purpose, as more than seventy to eighty head of sheep in the same enclosure is not generally to be recommended. Still we think they might be kept together without much risk, say in a shed 24 by 48, if, as we infer, they are not very large sheep.\* Two rams will be sufficient for such a flock, but they should have reached a proper age, and ought to receive a pretty good feed, say a quart of oats and corn together. It would be doubtful whether sheep would do very well on the low meadow mentioned.

An Indiana subscriber wishes to know about the use of broom corn seed as food for sheep and how to employ it. Mr. JURIAN WINNE informs us that it makes a very good feeding material; that when well ripened it will weigh 50 lbs. to the bushel, and bulk for bulk he considers it equally valuable with oats. It should

\* Mr. Winne says a shed 21 by 60 would be none too large, and that it should have a yard 100 feet square for a breeding flock, with ready access to water and plenty of litter. The last is a point which does not receive always the attention it deserves. It is very bad economy to stint the litter in the sheds and yards.

be fed whole, and may be mixed with Indian corn to the advantage of both.

In connection with the foregoing, another inquiry may be referred to, from an Otsego county subscriber, on the use of wheat, as compared with Indian corn, for feeding *cattle*. He, as well as ourselves, would be glad to learn the best way of employing it for the purpose, provided the relative prices of the two grains render such a course advisable. Judging from the published tables, as already stated, they appear to be nearly on a par, now, as regards price and nutritive value. How is it in practice? Mr. ELIHU GRIFFIN, an excellent farmer, feeder and breeder, in Dutchess county, informs us that he has fed wheat to *horses* with great satisfaction, and would prefer it to oats at \$1.25 per bushel for the former and 63 cts. for the latter.

#### SEASONABLE HINTS.

Now that wages are so high, every expedient must be resorted to for saving labor that is not attended with a positive loss. We lately rode past the barnyard of an enterprising farmer who had drawn in large quantities of turf and formed them into heaps with his manure, before the freezing weather of winter, to be drawn out in spring. These heaps will form good composts, and, if well mixed with the soil by harrowing, will greatly benefit the crops. This practice is far superior to the more common and improvident mode of allowing much of the manure to waste. But the same end may be accomplished in a cheaper manner. Draw out the fresh manure as it accumulates, and spread it on grass land, by way of preference, but it will do on any ground that is to be planted in spring. During every thaw, and whenever it rains, the rich portions of the manure will be dissolved and carried down into the soil, the stems and roots of grass favoring its downward diffusion. It thus becomes mingled with the particles of earth more completely than by the finest harrowing, and gives a vigorous start to the hay crop in spring, or if the sod is to be inverted for corn, will add many bushels per acre to the product. The only labor is to draw out and carefully and evenly spread the manure during the comparatively leisure season of winter; but to make the compost heaps with turf the latter must be drawn into the yard in autumn, when labor is much needed for closing up farm business; it requires much labor to break and intermix the ingredients, and the whole, including both turf and manure, must be carted out and spread during the hurrying season of spring—altogether more than tripling the labor. This mode of applying manure in winter succeeds best on rather clayey or strong soils, but does well on any. The objection frequently made that the rains will wash off the best parts, only applies to those few streaks where large streams of water run across the field—the practice of irrigating having shown in many instances that water holding manure in solution loses all its enriching parts by flowing a very short distance over a grass or other surface.

Winter crops are frequently injured by the accumulation of water in time of thaws, which afterwards freezes solid. It is important, therefore, whenever thaws occur, to remove snow banks or other obstructions in open channels or ditches.

During mild weather the owner may do a good ser-

vice for his fences by passing along with a basket of nails in one hand and a hammer in the other, and firmly securing every board that gives indication of becoming loose. Damage is sometimes done to crops by unruly horses throwing off the top rails of common worm fences, and leaping into cultivated fields. A good way to prevent this, is to wire the riders to the stakes, whether the latter be vertical or sloping, by boring a gimlet or auger hole through each, and then putting in and twisting a loop of annealed wire. Horses, finding the rails immovable, will let them alone. This will also commonly prevent strong winds from blowing down the fence. The work may be advantageously done during any mild day in winter. When the days are stormy the time may be profitably spent in the work-shop, which every farmer should possess. New gates may be made—handles for movable fences may be constructed, and ladders, for picking fruit, and other purposes. Every dwelling should have at least one or two good ladders at hand, long enough to reach any part of the roof in case of fire. Tools may be examined and repaired; chimneys, where wood is used for fuel, should be carefully cleared of soot at least once a year, and a convenient time is in winter. Most of the dwellings that are burned in the country take fire from accidentally-burning soot falling out on the dry shingles. The easiest and safest way to get rid of it, is to select a day when the shingles are wet with rain or thaw, and placing straw or shavings within, set fire to them and thus burn the soot. If the accumulation is moderate, it is most easily fired from the bottom; but, if there are large accumulations, they should be fired more cautiously by placing the combustibles near the top, the flames extending downward.

Give constant attention to the comfort of domestic animals, keeping them clean, well sheltered from cold winds, or even from small currents between the boards of sheds. Give them plenty of pure water, and feed them with great regularity. Never give them musty hay or straw, as in its effects it is more expensive than the best grain, even at these high priced times.

Fill ice-houses—remembering to cut the blocks by accurate measurement, so that they may pack closely together, without interstices—to encase them in ten inches or a foot of saw-dust outside, to provide thorough drainage below for the melting ice and plenty of ventilation over the top of the saw-dust above. With these precautions ice will keep perfectly in the roughest board shanty with a single partition for its walls. We have known ice to melt rapidly in summer when doors and windows were shut closely above, but to cease melting as soon as these were thrown widely open and wind and air admitted.

Orchards may be pruned during winter. Always avoid as much as possible making large wounds, and coat these, when they become a little dry, with ochre paint, or, what is cheaper, a mixture of brick dust, whiting or fine sand, with gas tar, and applied warm. The commonly recommended solution of shellac and alcohol is neater, but more expensive and not materially better. Avoid the common error of trimming trees *upward*, leaving the foliage on the top of long poles, but rather work downward from the top, or inward from the outside, leaving the head in a round sym-

metrical form, and admitting light and air from without. Trees pruned in summer, or when they are growing, will heal over more readily, but the operation always stunts them or retards their growth.

Pick over decaying apples in cellars—those slightly affected may be used for stewing, or if abundant, fed with great advantage regularly and in moderate quantities to milch cows, as well as to horses, sheep and swine.

Lay plans for next summer, and endeavor to arrange work and crops so as always to afford employment for hired hands, without being excessively crowded at any particular season.

Take precautions beforehand to avoid all causes of delay in work from accident, disorder and confusion—for weeks and even months of labor are saved when the machine of operations is kept constantly and steadily running the season through.

#### How to Make Yellow Butter in Winter.

Many people contend that it is impracticable to make nice yellow butter in the winter, or even during the foddering season, and, therefore, various remedies have been resorted to, for the purpose of producing nice yellow butter, when cows do not feed on green grass.

Why will a cow that is in a fleshy condition, give milk that will make yellower butter than a cow that is like the lean kine of Pharoah of ancient Egypt?

"Why," says one, "I did not know that there would be any difference in the milk." But there truly is a difference, and we will endeavor to explain the whys and the wherefores about the matter, so that there will be but little difficulty in producing yellow butter in the winter.

Why may we not have as good yellow butter, when a cow is fed on straw or white turnips, as we do when the same cow is fed on green grass?

Because there is a greater abundance of butter-forming material in good grass than there is to be found in straw or white turnips. And more than this, there is a delicious aroma in the butter material that is extracted from the grass, that is not to be found in straw, turnips or in many other kinds of feed, which will produce a good flow of milk.

Take for example, buckwheat bran and buckwheat straw, and white turnips, and they will produce about as large quantities of milk as any other kinds of fodder, providing they have not been damaged by being exposed to the influence of the weather. But, will such milk make nice yellow butter? By no means.

We all admit that there is nothing equal to good grass for the purpose of producing a rich yellow cream. But grass cannot be obtained in winter. Therefore, we must feed such materials as will be as nearly like grass as is practicable.

When grass is properly dried and converted into good hay—if it be cut before the blossom has fallen—it will yield cream which will make about as yellow butter as green grass would make. Therefore in summing up this subject, we are justified in saying that making yellow butter in winter, will depend on certain conditions and contingencies, which are as follows:

1st. A cow must have a good supply of good hay,

that has been made of good grass, cut before the blossom has fallen, and cured properly, without having been wet, while it was being cured. 2d. A few orange carrots daily—not reduced to a fine pulp and mingled with butter—but fed to the cow in connection with a few pounds of Indian meal, made of yellow corn. 3d. A good supply of good cornstalks—not those that have been frost bitten and weather beaten. 4th. A good cow, with yellow skin about the udder is very essential. 5th. A cow in good condition—not one as poor as "povertyation." 6th. A good stable well littered, and an abundance of clean water for the cow to drink. 7th. Never allow the milk to freeze. S. EDWARDS TODD.

#### Oil Cake and Cotton Seed Meal for Sheep.

In the last number of the Co. GENT., E. C. Holden inquires if any one has ever fed oil-meal to breeding ewes. Last winter I fed cotton-seed meal to over one hundred breeding ewes; commencing feeding it when the sheep were put up for the winter, and continuing it until June. The lambs were dropped in February and March, and in two weeks time ate their portion of cotton-seed with great relish. None of the ewes dropped their lambs prematurely; none suffered from its use, but all gained satisfactorily.

I am feeding the same this winter to all my sheep—breeding ewes, fattening sheep and lambs. After the first of November I gave a bushel per hundred daily, while they remained at pasture, and *think* my pastures and mowing fields next season, will more than repay the cost, besides *knowing* that the meal helped to carry my sheep through the most critical month of the year in gaining condition.

When grain is so high as at present, farmers should use more oil-meal. It will make more milk, more beef, more mutton, more wool and richer manure for the cost, than any other article of food, besides giving a change of diet, so necessary to the health of all animals confined to the barn and dry fodder. It produces just the degree of laxity of the bowels which is essential to health.

EDWARD R. ANDREWS.

West Roxbury, Mass., Jan. 2, 1864.

#### CHICCORY IN NEW-HAMPSHIRE.

MESSRS. EDITORS.—Last spring I procured from McElwain Brothers, Springfield, Mass., 15 cents worth of chiccory seed, and sowed it on two rods of ground, in drills 18 inches apart, and cultivated the same as carrots or parsnips. It came up finely, but being partly on a sidehill, nearly half of it was washed out during a rapid shower; the rest grew finely, and this fall I harvested 8 bushels from the 2 rods; some of the roots were 2 feet long, and weighed 2 pounds.

We consider it an excellent substitute for coffee. Three-fourths chiccory and one-fourth pure coffee will make a beverage that one-half of the coffee drinkers would pronounce the real West India. It is also a good substitute for dandelions, as the tender tops make first rate "greens." I would advise every farmer to sow a bed of chiccory and adulterate his own coffee. We prepare it the same as recommended in previous numbers of the Co. GENT.

S. C. PATTEE.

Warner, N. H.

Do your duty, however dangerous. Death comes to all, and the world does not need your bodily presence so much as it does your moral heroism.

## CULTIVATION OF TEASELS.

There are two kinds of teasels which flourish in this county—the wild teasel, which is worthless, and a nuisance on the farm, and the *fuller's teasel*, *Dipsacus fullonum*, which is cultivated to a large extent in many localities, for the burs or prickly heads which the plants produce, which are used in the manufacture of flannel or woolen cloth, for the purpose of raising a nap on the surface of the cloth. These burs or teasel heads are provided with very fine, sharp hooks, which subserve a purpose in the manufacture of cloth which machinery could not accomplish.

Teasels are biennial plants, or, in other words, it requires two years for them to come to maturity from the seed. A field of them presents the appearance of a field that has been abandoned to the growth of large bull thistles, and the first thought is, when we see a field of them, that they are a nuisance, and a disfiguring blotch on the farm.



THE TEASEL.

On the farm of W. J. Townsend, Skaneateles, there were, when I visited his residence, some eighteen acres of teasels, and it was no uncommon occurrence to see large fields of them in that locality; and the profit arising from the sale of the heads usually exceeds the amount which would be realized from a good crop of cereal grain.

The seed is usually sown in drills, so that the plants may be cultivated with a horse hoe; and as the plants can only be started the first year like the plants of a bull thistle, the seed is sometimes sowed in the rows of Indian corn, and the young plants cultivated with the corn. In some places in the county I perceived that the worms had about destroyed the corn, and the teasel seed had been planted, and was being cultivated instead of corn. In such cases the plants would become large and strong, and would yield a large crop of good heads the next season.

It is said that the teasel does not flourish luxuriantly on all kinds of soil, and that a clayey loam well cultivated, and in a good state of fertility, is best adapted to their growth. Where soil is too wet to raise winter wheat, and where red clover is liable to be lifted out by freezing and thawing in winter, the teasel plants will also be injured more or less, by being thrown out by frost.

The heads are cut at various intervals during the summer, according to the maturity of the blossoms, or about the time when the blossoms begin to fall from the heads. The heads are dried, assorted, and packed in boxes for market. The largest and finest heads are called *kings*, which command a superior price. The second quality are called *middlings*, and the unripe and inferior quality are denominated *scrubs*.

A ready market is usually found for the heads, and the assorting and packing can be performed at times when the labors of the field are not demanding the immediate attention of all the laborers.

Here is another consideration which is worthy of notice, which is, that a crop of teasels might be grown without exhausting the soil but little, as teasels will take up those substances from the soil which would not be taken up by those plants which produce cereal grain. Therefore, taking this view of the subject, we may raise a profitable crop from the soil, without injuring its fertility for a crop of Indian corn, wheat, oats or barley.

S. EDWARDS TODD.

## OXEN FOR FARM TEAMS.

MESSRS. EDITORS—As there is a large and increasing demand for army horses, and as this demand is pretty sure to continue, if not increase, as long as the war lasts, it having been stated in Gen. Halleck's recent report, that the cavalry in the army of the Potomac averages a remount once in two months—that is, that horses only last two months on an average in that service; and as this is making, and must continue to make horses scarce and high, it would seem that not only duty and patriotism, but their interest would indicate that all farmers that can, should substitute oxen in the place of horses for farm teams. Consequently it may not be amiss to offer some facts and suggestions in regard to the advantages of oxen as farm teams.

There are comparatively few farms on which one or more yoke of oxen cannot be kept to good advantage. But the farmers that may find it an especial advantage to keep oxen are, first, those that are just commencing, or are farming on a small farm, more or less in debt, and second, the larger farmer that finds it necessary to keep more than one team.

First, in relation to the small farmer. He buys a yoke of oxen for what one good horse will cost, and most likely gets a yoke in the bargain; so that with the expense of a few shillings for a chain, he is ready to hitch on to any thing and go to work. Then the principal part of his work being in the spring, he can, by giving them good feed through the summer, and pumpkins and roots or a little grain in the fall, and perhaps the fore part of the winter, make them sell for beef for from \$25 to \$50 more than he paid for them. This course may be followed on all farms where a yoke of oxen can do the work, and in numerous instances—many more than most farmers are aware of—the turning point between success and failure, may be found in the choice of a team to begin with. That is, if the money that it costs to buy and rig out a span of horses for business, and generally for riding around in more or less style, over and above the cost of oxen, had been paid on the debt on the farm, instead of having been paid for perishable property, it would have made a great difference in the final results, if not all the difference between success and failure. And lest this should be taken as a mere opinion, I may be allowed to state that I am satisfied it has been verified in many instances that have come under my observation, as well as in my own personal experience; having succeeded on a small, poor farm, where almost every one prophesied my failure, and where I am satisfied that had I tried to buy and keep a good horse team from the commencement, success at the best would have been much more difficult, if not impossible.

I need not give a detailed statement of the many

ways and times that a yoke of oxen will be found useful, handy, or convenient; all farmers understand these things. But my principal reason for urging farmers that have use for more than one team, to keep a yoke of oxen is, that by following the course I am going to recommend, they may have the use of a team at a cheaper rate than in any other way. Nor am I about to recommend some new but plausible theory that has never been tried, as the course here proposed has been pursued to a considerable extent in this section.

Those having use for more than one team, who have kept and used oxen to the best advantage, have generally bought in the fall or fore part of winter, when oxen are generally the cheapest, often being in rather low condition, and the owners anxious to sell to raise money, they are frequently bought for from \$20 to \$50 less than they would sell for in the spring, if in fair condition. They can be kept thriving through the winter, if fed good cornstalks and a good allowance of roots, or a moderate one of grain, or if fed hay, with less roots or grain; and plenty of good hay and more grain in the spring, will put them in fine condition for spring work—during which they should be well fed if worked hard. And as in most parts of the country, spring work and breaking up summer fallow in June, constitute the principal part of the heavy work for the season, by giving them good pasture through the season, and pumpkins, roots, &c., in the fall, they will be in good condition to feed in the winter, if they will not sell for beef before winter commences—as has been the case in many instances in this vicinity—at a very satisfactory advance on the cost. By following this course, and selecting oxen that are good feeders, it need cost but very little if any more to make a yoke of oxen very fair beef, than it would to keep a span of horses in good condition, and thus giving a profit of from \$25 to \$50, and sometimes even doubling the money on the oxen, while the horses are wearing out.

This brings us to another important consideration that is seldom thought of by farmers. Where is the man that has fully comprehended the fact that the something more than 500,000 horses in this State—there were 503,725 in 1860—will eventually all be worn out, or die by accidents or diseases. That is, whatever value there may be in this large amount of horses, must eventually be lost, there being next to nothing left but what is made by using them. Now for the purpose of making a comparison, I will suppose that horses average ten years labor; then calling them worth \$200 a pair, it would make their labor cost \$20 a year, besides keeping. Now as we have seen that the labor of a yoke of oxen may not only be had for the keeping, but a profit of from \$20 to \$50 besides, say an average of \$30, which added to the \$20 for the natural wear of the horses, will make \$50 a year. To this should be added at least ten dollars for blacksmithing, wear of harness, and interest on the value of the horses over the oxen, which makes \$60 in all. Now if 100,000 yoke of oxen could be substituted for 100,000 span of the horses used in this State, and the oxen managed in the way here proposed, it would make a saving of \$6,000,000 in the single State of New-York. Or to take another view of the subject, we see by a table in the Co. GENT., vol.

16, page 98, that there were 231,740 farms in this State in 1855. Now if a yoke of oxen could take the place of a span of horses on 200,000 of these farms, it would make a difference of \$12,000,000 in the State every year.

But as large as these figures appear, and though from being spread over the whole State, such results may not appear reasonable or consistent with the general opinion of farmers, yet I believe that a little consideration will convince them of the general truth of these statements. While those that have practiced the course here proposed in regard to oxen, will see that I have made my estimates and calculations on a moderate scale. At any rate, I know that were I disposed to give extreme cases or profits, I could give the experience of farmers that have made many times the amount here stated; men, that though they always kept oxen for working teams, and were able to get along with less horses by having them, yet by careful usage, and good care and feeding, would be working them into beef from the time they were brought home. In this way they would make beef of quite a number of yoke of working oxen in a year, though seldom having more than one pair at a time, and never more than two, but still realizing a profit over cost in the course of the year, of several hundred dollars; and I have frequently known instances where from \$75 to \$100 were made on a single yoke. True, this course is most profitable with an advancing market; and this is precisely what makes these suggestions particularly seasonable at this time, as we now have an advancing market, with a good prospect ahead. And while it may be said that those that make the most money this way must be good judges of cattle, it is equally true that this is one of the cheapest and most profitable ways that farmers generally can make beef. F.

Western N. Y., 1861.

#### TAGGING SHEEP.

Those who delay shearing sheep until June, appreciate the practice of tagging sheep—that is, cutting the wool from the hind quarters and legs, thus preventing the accumulation of filth during the time when the animal is feeding upon the freshly growing grass, with its relaxing and physicing properties. To make this work less tiresome, a bench has been used, made as follows: Take a plank 15 inches wide at one end and 8 at the other, and 3½ feet long; nail strips of board on the sides of six inches wide; put in legs at the narrow end 2½ feet long, and at the wide end 2 feet, thus making it slant downward. Lay the sheep in on its side, with its head toward the upper end. It cannot get out—is easily managed—put a basket underneath to hold the wool—do the work thoroughly, and when done remove the basket, raise the upper end, and the sheep slides gently to its feet. Tagging is best done before the sheep go out to grass, from the 1st to the 15th of April. Z. E. J.

**Wheat for a Barrel of Flour.**—In applying for a premium for the best barrels of flour from winter and spring wheat, offered by an Iowa Agricultural Society, James Pratt & Co. state that 16 bushels of winter wheat yielded three barrels and 103 pounds of flour—at the rate of 4 bushels and 15 pounds of wheat to the barrel. Of spring wheat 50 bushels yielded 11 barrels of flour, being 4 bushels and 32 pounds per barrel. The wheat used was of a fair quality, and no more.

### A Profitable Corn Crop—How Raised, &c.

The best corn with us (southern Herkimer county,) is raised on sod. This was not always the practice; and now and then a farmer turns down stubble, either of grain or corn, for corn. But the best cultivators, and the great majority, plant upon sod. This, a thorough experience has demonstrated, is the best practice.

And now let me give you a particular instance of successful corn-raising,—not only successful in the amount of bushels, but profit on the whole crop, labor and all considered. Farmers want not only great crops; they want profitable crops. And here is one.

Moses Smith, a neighbor of mine, last spring turned in nine acres of sward. The sward had been *meadow* for twelve years. It was plowed *eight* inches in depth. This was done to secure mellow top soil, as well as new fertility from below. Another thing: The sod turned in deep, the worms are kept below, working in the sod till the corn has a good start. That is the theory, and it seems a successful one.

This sod was plowed in a few days with several teams, and finished the middle of May. The weather was favorable, and the ground in good order. Immediately after the plow left, the corn was planted. Before it came up, a handful of hen manure (dry) mixed with a little plaster and wood ashes was applied to each hill. This was done, says Mr. Smith, to prevent the insects from hurting the corn, and to give it an early start. It came up readily and "black." It grew on at once. Moist warm weather setting in, the cultivator was called into requisition, and, during the summer, was passed six times through the rows each way, the rows being *four feet* apart. The hoe was used around the hill to cut away the grass, and in such manner as to draw away some of the ground, so as to give the sun a more direct chance at the roots.

Thus the soil was kept clean with comparatively little labor, the weeds not being very abundant on the deep turned down soil. It was what may be called a clean crop. It was certainly a very clean soil, and an even piece of corn, showing good promise at once and throughout, and the best crop of corn, the evenest and the finest, all things considered, I ever saw. The soil was thoroughly mellow, a deep, rich, black loam, with good natural drainage in the sand and gravel mixed with it, except at the upper end, where water had always been standing more or less during the greater part of the season, from time immemorial. Through this a ditch was run, I believe the fall previous. To my surprise, and every body else's, the corn was equally good here. But the soil was as mellow as the rest, and equally rich and black, with, I believe, a little marl mixed with it.

There were from four to six stalks—averaging *five*—in a hill. Each stalk had from *two to three* large ears Dutton corn, "medium size."

The corn was cut in the first half of September; begun on the first and finished the twelfth day of the month. It had been well glazed, but no more, when cutting was commenced.

I should have mentioned that several acres of the lot had been in corn the year before, on sod turned down. This corn was equally good with the rest; and here the cutting was commenced, perhaps on account of the corn being riper, though of this I am not cer-

tain. The corn here last year was excellent, but lacked a few bushels to the acre of the crop of the present season, which was more favorable to corn, especially on sod, but more especially sod turned in deep.

The yield of the nine acres averaged a trifle over *eighty bushels to the acre*. The corn was unsurpassed in quality, the grain hard, plump and glistening—and it was *all* like this, with the most trifling exception.

The stalks, by being cut early, when yet fully green, the husk of the ear being only changed somewhat,—afford the best and sweetest of fodder, having this advantage over hay, say our farmers, that it makes yellow, as well as better flavored butter, and is preferred to any hay. The stalks are fed the fore part of winter, and much butter is thus made, which always sells for the highest price. Besides, cows are said to give milk longer, and thus get up a habit in this direction. Thus the stalks will pay all expense, and leave the corn a clear profit of *ninety dollars the acre*.

Mr. Smith's father, a few years since, raised 1,500 bushels of hard ripe corn, for which he got a dollar a bushel, from 20 acres of similar land, the farms joining. This is about the average yield, taking the years as they run. Sometimes but 60 to the acre is realized, and by some slovenly farmers even less. But the great depth of soil, its richness and thorough (natural) drainage, its uniform mellowness and blackness drawing the rays of the sun—and the hills on either side of the valley, running east and west, thus warding off the winds, and giving a direct chance to the sun,—all these things have their effect in producing in this valley the corn that is raised. But corn is raised successfully, in the same manner, on the hills, and throughout this section generally, varying in profit with the nature of the soil.

The two successful crops of the valley are corn and hops, making fortunes for their proprietors; and they are usually grown on the same farm, and generally in addition to a dairy. The three are usually found together, the dairy enriching the soil (by pasturage and the manure that is made,) the cornstalks supplying fodder, and the corn ground preparing the land for seeding, which generally here follows the next crop, either of oats, wheat or barley, the latter two being preferable for seeding.

The principle of planting corn on green sward is held to be this: The mellow soil on top is favorable to tillage, and free (if plowed deep) from insects, as we have said; and by the time the roots penetrate well the sward—which occurs at the commencement of the hot weather in July—decomposition will have set in, which *warms the under soil* as well as enriches it, and thus drives on the corn. This is the principle held here. At any rate, corn is a success on greensward, turned down in the spring. Now and then fall-plowing has a good effect, or has had, as little is done now. But it seems the sod turned down gets soaked during the winter, unless the drainage is perfect, which is far from being the case generally. This, by the time the corn is planted, seems to sour, and if turned up with the plow is often found to be wet. Especially late (fall) plowing seems to have this effect, probably by packing the soft wet soil. In clay we know this to be the case, even if the soil is but slightly mixed with it. One of the greatest injuries to soil, whether plowed in the fall or the spring, is to plow it wet. This is

the case with our soil, as I have often enough witnessed. I find there is little difference whether the soil is black or yellow, rich or otherwise, though gravel or sand is less objectionable than clay. Last fall our neighbor Hall plowed his garden late and very wet. Though the soil is a very rich, black, mellow soil, highly productive, we prophesied a failure the next season; and it turned out so, eminently. I have lost entire crops in this way, one, a barley crop on good ground, by harrowing it when wet, and but once at that. The ground was bare, and finely harsh, almost a miracle to look at in its consequences.

On the whole then, spring plowing for corn on sod, is preferred, and is always a success if the corn is well taken care of, in this locality, especially in the valley. And why not so in other places? We think Mr. Smith has hit upon the right management, and it is his second year of farming; he is a young farmer, and reads and thinks, and labors—labors *himself*.

I should have mentioned that no manure is used, the sod being considered sufficient manure. This is applied on grass lands as a top-dressing here with the best of success—though none that I am aware of, and I am pretty certain in this—was ever used on Mr. Smith's meadow, the soil being rich and always yielding well without manure.

F. G.

Starkville, N. Y.

#### Making Beef and Mutton in Winter, &c.

This will be profitable business for farmers if they only engage in it intelligently and understandingly. Beef cattle of all kinds need a comfortable place to lie down in. Hundreds of beef cattle are now being fattened in our county, which are kept in the open field, with nothing but the broad canopy of heaven for a shelter, and the wet or frozen ground for a bed. Such cattle become fat in time, but that is a very expensive way of making beef. If such animals could have the benefit of a comfortable stable in cold weather, one bushel of meal would produce two pounds of beef, where it makes only one now.

Then, here is another very important consideration. All the rich manure of such animals, which abounds largely in grain-producing material, is scattered anywhere and everywhere, except where it will promote the growth and increase of a crop of grain next season.

Farmers should remember that when they feed grain to animals that are being fattened, those animals appropriate but a small proportion of the grain or meal which they consume, to the purpose of building up their frames and secreting fat. What, then, becomes of it? Why it passes off in the manure. And this is the grand reason why the manure of fattening animals is so much more valuable for crops, than the manure of store animals.

#### Value of Manure.

In a bushel of Indian corn, for instance, there are fifty-eight pounds of grain, which will make, according to circumstances and condition of animals, from three to twelve pounds of flesh and fat. Now what becomes of the remainder of the 58 pounds? A portion of it is consumed—burnt up as fire burns wood—in sustaining the necessary warmth of the animal. But the greater proportion is cast out in the droppings.

This rule holds good in fattening neat cattle, sheep,

swine, and all other domestic animals. And herein, to a great extent, lies the real profit of feeding animals grain. The profit is in the *manure*. If that is lost or wasted, the profit is often very small, or there is no profit at all.

#### Protecting Manure.

In view of the fact that there is such an abundance of grain-producing material in the manure of those animals that subsist on grain or meal, we perceive at once the great importance of keeping such manure where rain will not wash it from the straw and carry it off to the ocean.

Protecting manure by erecting cheap sheds over it, is an item of labor that farmers can work at in the winter, very advantageously and profitably. And while they do this work, they are taking a very important step towards introducing a renovating system of farm management, and of improving the fertility of their soil, not only for grain, but for grass or vegetables.

Where the water from the eaves of the buildings is permitted to fall into the manure-yard, eave troughs should be put up as soon as may be practicable, as a few heavy showers will often injure the value of manure enough to pay the expense of good eave troughs to a barn. The skillful farmer's motto must be, in the winter, to save all the manure, and raise large crops next season.

S. EDWARDS TODD.

#### A WISCONSIN FARM.

N. F. Goodrich of Rolling Prairie, Dodge county, Wisconsin, gives me the following statement of the products of one hundred and fifty-five acres, comprised in his farm, and the expenses of working the same, for and during the year 1863. Some of the items are estimated, and products not sold, are put down at the present market rates. Items, the actual measurement of which have not been taken, are intended to be placed below, rather than above their actual quantity.

1,470 bushels of wheat, grown on 70 acres, at \$1.02,...	\$1,499.40
300 do. barley, do. 7 acres, \$1.10,....	330.00
150 do. oats, 55 cts.,.....	82.50
475 do. corn in the ear, 35 cts.,.....	166.25
350 do. potatoes, 37½ cts.,.....	185.00
4 hogs sold,.....	51.00
10 tons of hay,.....	60.00
Profit on stock fed,.....	80.00

\$2,454.15

#### EXPENSE INCURRED.

2 hired men 9 months, at \$13 per month,.....	\$234.00
1 do. 4 do. \$10 do. ....	40.00
Extra work in harvest,.....	60.00
Wages of hired girl,.....	70.00
Expense of threshing,.....	83.00
Taxes estimated the same as in 1862,.....	60.00
Interest on capital, and wear and tear,.....	350.00
	897.00

Showing a balance in favor of Mr. Goodrich of... \$1,557.15

No account is made in the above statement, of 475 bushels of corn, 350 bushels of oats, 84 bushels of carrots, beets, etc., 50 bushels of potatoes, 130 bushels of wheat, 2 fat hogs, the products of 4 cows, 30 tons of hay, and some minor articles designed for use of family, and feed of stock, seed, &c. His family expense bill has been much increased this year, in consequence of a great deal of sickness in his family, losing three bright, intelligent children during the year. His own time and attention has been much taken up with the unusual trouble and cares in his family. Yet, with all his additional expenses, and losses, for want of personal supervision and labor, he will be able to show a handsome nett profit.

L. L. FAIRCHILD.

Rolling Prairie, Wis., Dec. 20, 1863.

[Reported for the Country Gentleman and Cultivator.]

**The Cheese Manufacturers' Convention.**

The convention, called by over forty prominent manufacturers in Central New York—the first of the kind ever held in the United States, and probably in the world—assembled at the Court House in Rome on the 6th of Jan. The court room was nearly filled with the intelligent and practical men interested in the proceedings, when the convention was called to order, and Col. Seth Miller of Constableville, Lewis Co., appointed temporary chairman; and Messrs. Geo. W. Pixley of Kirkland, Oneida Co., and B. F. Stevens of Lowville, Lewis Co., were appointed temporary secretaries. The call was then read, after which the chairman appointed a committee on permanent organization. Adjourned until 2 o'clock P. M.

*Afternoon Session.*—The audience was largely increased, many being unable to find seats. Representatives were present from sixty-nine Cheese Factories, with from 150 to 1,000 cows each, as follows:

Location.	No. Factories.	No. Cows.
Oneida County, .....	32	15,003
Madison do. ....	10	6,650
Herkimer do. ....	5	2,420
Lewis do. ....	5	2,897
Chautauque Co., .....	3	1,700
Chenango County, .....	3	1,300
Cortland do. ....	3	2,710
Oswego do. ....	3	1,150
Fulton do. ....	1	600
Montgomery do. ....	1	600
Erie do. ....	1	1,000
Jefferson do. ....	1	220
Warren, Mass., .....	1	500
	69	36,753

A large number of gentlemen were present also from private cheese dairies from this and other States.

On the report of the committee, the following gentlemen were elected permanent officers of the Convention:

*President*—JESSE WILLIAMS of Oneida County.

*Vice-Presidents*—Lyman R. Lyons, Lewis; L. Warner, Ontario; Danl. Smith, Montgomery; A. L. Fish, Herkimer; Alonzo Peck, Madison; D. W. Maples, Cortland; M. R. Stocker, Otsego; George C. Morn, Erie; D. H. Goulding, Chautauque; A. D. Stanley, Jefferson; Alfred Buck, Oneida; Dwight Ellis, Mass.; A. Bartlett, Ohio.

*Secretaries*—B. F. Stevens, Lewis; Geo. W. Pixley, Oneida.

Sundry propositions were made by different gentlemen, as to the course that should be pursued by the convention, and finally the following committee of five were appointed to report to the Convention the details of cheese making by the factory system, and matters pertaining thereto:—Jesse Williams, Oneida; H. Farrington, Herkimer; Allen F. Fowler, Oneida; Isaac Schell, Herkimer, and Wm. Johnson, Ontario.

[Here a discussion on the *Process of Cheese Making*, took place, the notes of which we are obliged to defer until next week. EDS.]

On motion a committee of five, to report preamble and articles of association for a State organization, were appointed as follows: B. F. Stevens, Lewis; George Williams, Oneida; S. L. Fish, Herkimer; B. Stiles, Madison; and G. B. Weeks, Oneida.

*Evening Session.*—Mr. Geo. Williams of Oneida, offered a resolution that it is impracticable to establish an agency in the city of New York. It required but a few minutes discussion from a few of the clear headed to decide to adopt the resolution.

The committee reported a petition to the Legislature in regard to frauds and adulteration in milk, which, after amendment, was adopted as follows:

To the Honorable the *Senate and Assembly* of the State of New-York: We, the undersigned, citizens of the State of New-York, interested in the manufacture of cheese by the Factory system, respectfully petition that your honorable body pass a law inflicting severe penalties upon all persons who sell or furnish milk to factories, who shall dilute with water, adulterate, or in any way impair the quality and value of the milk so sold or furnished.

Mr. Fish of Herkimer, proposed several important questions relative to the manufacture of cheese by the factory system, and made some remarks. He believed the factory system the only true one to make cheese by, owing to the greater facilities for making and curing—the producing of a better quality of cheese and taking out of families an unhealthy and injurious business.

Mr. Bartlett of Ohio, said that the editor of the Ohio Farmer had sent him a copy of his paper containing an article of strictures and objections to the factory system. One of the objections was that milk sent to factories was liable to be adulterated, and that there was no instrument or means to detect the adulteration. He said adulteration could always be detected, but dilution was not so easy; yet by the use of the hydrometer, the lactometer, and a French instrument not yet introduced into this country, together, dilution could generally be detected. Another objection is the difference in the quality of milk of different dairies. This objection could only be fully met by the overbalancing advantages of the factory system, but we lack statistics on this point. He had arrived at this conclusion by testing the milk of many factories, that the difference was not over one per cent. in any case. The loss of whey was another objection. Mr. Bartlett thought it had been a losing thing with him, to feed it to hogs.

The subject of making cheese on the Sabbath was discussed somewhat. Mr. Lyon of Lewis, stated that an experiment had been made in his county, of keeping the milk at home on the seventh day, and making it into butter, &c., instead of sending it to the factory. The conclusion arrived at was that it was better for all concerned.

Mr. Bartlett thought one cent a pound for the manufacture was not a sufficient remuneration, but that one and one-quarter cents was about right. He was anxious to hear the whey question discussed.

Mr. H. Farrington of Herkimer, had had extensive acquaintance with cheese factories, and had come to a different conclusion with respect to the value of whey than the gentlemen had from Ohio. He had said we did not get all the valuable material out of the whey. True, and for that reason it was valuable for hogs—in many cases he believed it more than doubled the weight of hogs. It should not be fed alone, but corn and grain should be added to produce healthy hogs.

Mr. William Wheeler of Trenton, had a small factory of 200 cows—had kept 50 hogs—two-thirds of them grown, the rest spring pigs. Fed the whey, sweet and warm, till the first of Sept.; then commenced feeding grain. The result was \$2 profit per cow.

Mr. Jacob Ellison of Herkimer, said the factories had greatly increased the value of American cheese in the English market; they alone had done it. Their cheese had sold during the past season for one and two cents per pound more than the cheese of single dairies. This in itself was a sufficient answer to all objections to the factory system.

*Thursday Morning, Jan. 7th, 1864.*

Convention called to order by the Chair. Mr. Simmons of Oneida, offered the following resolution—that the Convention approve, for the size of cheese, 20 inches in diameter and 10 inches deep, weighing, when cured, about one hundred pounds.

Mr. Comstock moved the resolution be laid on the table, in order to receive the report of the Committee on State Organization. The committee then presented their report. Mr. Comstock moved that the convention receive the report, and that they proceed to adopt or reject the same by separate articles. The report was, with but little discussion, adopted as follows:

Whereas it is deemed expedient to organize an association through which, as a medium, results of the practical experience of dairymen may be gathered and disseminated to the dairying community—therefore resolved that we the undersigned, do hereby associate ourselves together for mutual improvement in

the science of cheese-making, and more efficient action in promoting the general interests of the dairying community.

Art. I. The name of the organization shall be the New-York State Cheese Manufacturer's Association.

Art. II. The officers of the Association shall consist of a President, five Vice Presidents, Secretary, and Treasurer.

Art. III. The President, Vice Presidents, Secretary, and Treasurer, shall constitute the Executive Board of the Association.

Art. IV. The officers of the Association shall be elected at the regular annual meeting, and shall retain their offices until their successors are chosen.

Art. V. The regular annual meeting shall occur on the second Wednesday in January of each year, and at such place as the Executive Board shall designate.

Art. VI. Any person may become a member of the Association, and be entitled to all its benefits, by the annual payment of one dollar.

Mr. Fish of Herkimer, suggested as a plan for the Association, that all who chose should propose questions relative to the business of cheese-making, which should be circulated among the members by the Executive Board, and that from time to time premiums should be offered for the best answers to specified questions.

Mr. Comstock of Utica, wanted to have the whey question talked of more—said that he had proved by years of experience, that whey was worth as much to feed to cows as to hogs—he considered it worth \$5 per cow when fed to them.

Mr. Stevens of Lewis, thought the business of perfecting the organization of a State Association should first be attended to.

On motion, a committee was appointed to report officers for the association; on whose report the following officers were unanimously elected:

PRESIDENT—GEORGE WILLIAMS, Oneida.

Vice-President—Seth Miller, Lewis.

2d do. David Hamlin, Jefferson.

3d do. A. L. Fish, Herkimer.

4th do. George E. Morse, Madison.

5th do. Moses Kinney, Cortlandt.

Secretary—Wm. H. Comstock, Utica.

Treasurer—Lyman R. Lyon, Lewis.

Gentlemen now complied with the conditions necessary to become members of the association, and within the next two or three hours over one hundred paid in their fees and became members of the association, thus taking another step in the history and advancement of the Dairying interests of the State, and we might say of the world. The first name on the list, as it appropriately should be, was Mr. JESSE WILLIAMS of Rome, the originator of the Factory system.

A few minutes after the election of officers, the convention adjourned *sine die*, and immediately president Geo. Williams took the chair, and called the Association to order. Soon after, a recess until 2 o'clock P. M. was taken.

*Afternoon Session*—Several verbal and written reports were given by manufacturers respecting their operations the past year, some items of which were number of pounds of milk received—pounds green cheese made—pounds dry cheese made—pounds shrinkage per hundred—pounds of milk to one pound of dry cheese, &c.

One or two facts we state, as being demonstrated by these reports—that it takes some 10.20 lbs. of milk to make a pound of cured cheese; also that the shrinkage is about 5 per cent. There are other nice points and facts that can be demonstrated to almost a certainty by a systematic and similar report from each one of the factories now in operation and those to go in operation this coming season. This desideratum can be reached by complying with the following resolution adopted on motion of Mr. Fish of Herkimer:

*Resolved*—That every member of the association be desired to forward to Wm. H. Comstock, the Secretary, a written report in detail of his cheese making operations, as full as may be, to be published in the Transactions of this association, to be distributed to each member thereof.

Mr. Comstock offered the following, which was also adopted:

*Resolved*—That the Executive Board shall make out and print, as soon as possible, a full set of statistical and other questions, in every way relating to cheese making, curing and selling, and send such report to each member of this association, and that

each member answer all questions therein proposed, and make such other report as he may think proper, and send to the Secretary before the next annual meeting.

The Secretary read the following questions, which had been written out by Mr. Fish of Herkimer.

1. What effect does the use of a double quantity of rennet produce?
2. What is the relative value of whey to feed his cows?
3. What makes porous cheese, and how can we prevent it?
4. Should curd be pressed hard when first put into press?
5. What is the effect of salt, and is it best to salt in the whey?
6. Should curd be cut as fine as wheat or left as large as one-fourth of an inch square?
7. What temperature is necessary to cure cheese after they are pressed?
8. Should any curd be saved over to put in next day's cheese?
9. What is the best size of cheese for market?
10. Is it necessary to keep the cheese of uniform size?
11. Should curd be put to press cold, warm or hot?

It was suggested that these questions, or their ideas, be incorporated in the Circular to be issued by the Executive Board.

Mr. Simmons' resolution in regard to size of cheese, was now taken from the table, and after considerable discussion, it was voted upon and decided in the negative.

There appearing to be no further business before the association, it was moved and carried that they adjourn, subject to the call of the Executive Board.

### “HOP-PLANT LOUSE.”

MESSRS. EDITORS—I herewith transmit to you for publication, (if you should deem proper,) a communication elicited by the writer, from the Entomologist in the Agricultural Department at Washington, evincing the fact that the hop-growers of our country have a formidable enemy to contend with from the insect that made its appearance last season. Mr. GLOVER (the Entomologist) thinks the insect identical with those in the English hop-gardens, and which has caused such destruction there, and as yet without a remedy.

The hop-growers would be gratified to hear from Dr. FITCH upon the subject, who perhaps will be able to suggest some mode or article as a preventive, as these insects doubtless lay *entrenched* (like the rebels) for a devastating raid another season.

Oneida Co., Jan. 6, 1864.

L. T. MARSHALL.

DEPARTMENT OF AGRICULTURE,  
Washington, D. C., Oct. 19, 1863.

L. T. MARSHALL, Esq.—*Dear Sir*: Your letter having been misplaced by one of the clerks, was only received by me on Saturday; otherwise it should have been attended to ere this. I am sorry to learn that the “hop-plant louse” has made its appearance in your neighborhood, as these insects have proved *very* destructive to the hop-gardens in Europe. At present I am unable to suggest any effectual remedy, but it may be of interest to you to know that the red beetle, spotted with black, and commonly known as the Lady-bug, is one of the greatest auxiliaries or benefactors to the hop-growers, inasmuch as in both the larva and perfect state, it destroys millions of hop-plant lice, its food consisting almost entirely of aphides or plant-lice. I merely mention this as many people erroneously suppose that the Lady-bugs have something to do with the propagation of the aphids, both insects appearing about the same time and upon the same plant. The larva of the Lady-bug is a long alligator shaped, six footed, dark colored insect, and subsists entirely upon plant-lice. The Lady-bugs ought therefore to be encouraged and protected by all hop-growers.

Should you hear of any effectual remedy, you would confer a great favor by communicating it to this Office, in order to make it known to the public, and I shall at all times be happy to answer any questions on the subject of insects injurious to vegetation, that I am able to do.

TOWNEND GLOVER.

## THE PRODUCTION OF SEXES AT WILL.

A friend at Havre, France, sends to the COUNTRY GENTLEMAN a French journal of recent date, containing an article from the careful and well known pen of Mons. J. A. BARRAL, on the subject at our head. We translate and condense the more interesting portion of it for the benefit of our readers.

Live stock, remarks M. Barral, plays a role in agriculture, on the importance of which it is unnecessary to insist—to produce manures, without which we cannot have abundant crops. But to raise these crops economically, we must get our manures cheaply; hence the animals producing them must bring us in also meat or milk or wool, and if the food and keeping of the animal is thus paid for, the manure costs nothing, and the cost of the crops raised is so much the less.

Now the different purposes for which live stock is thus kept, render it very desirable that we should be able to obtain offspring that are either male or female at will—either milch cows or working oxen as the case may be, for example; or, in breeding, that we might use a particular animal as a sire of either sex, according to its individual characteristics, and as they might better suit the one purpose or the other.

A new discovery, M. Barral goes on to say, appears to give “a complete solution of this question, and if future trials meet with success equal to that of those already made, man will thenceforward be in possession of a law involving social consequences of the highest order.”

The discovery referred to is the result of investigations conducted for a number of years by Professor THURY of the Academy of Geneva. His memoir detailing these investigations was submitted to the Academy of Sciences some time ago, and a commission appointed to verify the theory.

Prof. Thury claims, in the outset, that an analogy exists between the vegetable economy and the animal economy, and his theory he avers has been found to apply to both. In brief form it is this: *that the production of male organs arises from the greater maturity and more complete development of the germ.*

As a consequence of this theory, with all oviparous animals, the eggs earliest laid should give females, and those of a later date males. “Now,” says Prof. T., “such an observation was long ago made by Huber. That great naturalist remarked that among bees, when an early fecundation took place, females are the result, while later copulation always produces males. I have reason to think also that with domestic fowls the last eggs laid give cock-birds.”

“The sex depends,” he afterward asserts, “upon the degree of maturity of the egg at the moment of fecundation; that which has not reached a certain degree of maturity producing the female, and, if fecundated when this point of maturity has been passed, producing a male. Between these two periods there is a moment when the change of sex occurs, and as to this phenomenon there still reigns the greatest obscurity.”

The practical result of this reasoning is, that the first hours in which a cow, for instance, is found to be in heat, should be taken advantage of, *if heifer calves are desired*; if the contrary, copulation should be deferred until the latest practicable point. This rule holds good, it is stated, both with cattle and sheep,

and throughout the animal kingdom, man included—or, as M. Barral gracefully says: “If the absolute verity of this law is demonstrated, which we are not yet prepared fully to admit, there will result from it social consequences the importance of which can with difficulty be calculated. Families will rarely have to deplore the lack of male heirs, and mothers will nearly all be able to bequeath their sweet and charming qualities to a daughter.”

The only experiment given in the brief article before us, to support the theory of Prof. T., is one made at his request and in confidence by a Swiss farmer at Montet in the Canton de Vaud, the son of the President of the Agricultural Society of Southern Switzerland. His instructions were received from Prof. T. in February, 1861. He was keeping a herd of cows of the Schwitz breed, and using a pure Short-Horn bull, and had a demand for all the cross-bred heifers he could raise, but no sale for bull calves. He therefore followed strictly the Professor's directions, and *succeeded in obtaining heifers in twenty-two successive cases.* “Having purchased at a later date,” he writes, “a pure Short-Horn cow, it became necessary to obtain a pure bull calf to replace the sire. I again followed Prof. Thury's prescriptions, and success again confirmed the truth of the process—the application of which is immediate and very easy. I obtained, beside my Durham bull, six other bulls, cross-bred Durham and Schwitz, [bulls are there worked the same as oxen] which I destined for work; by choosing cows of similar color and size I obtained pairs of oxen very well mated. I have made in all twenty-nine experiments by the new system, and all have given the product sought, male or female, without a single instance of failure. These experiments were all made by myself in person, and I regard the system as perfectly correct and sure.”

The trial is one so easy to be made,—provided M. Barral gives us a sufficient abstract of Prof. T.'s memoir to cover the whole ground occupied,—that we hope the subject may receive the favorable attention of breeders in this country, and that the results of their experiments may be communicated for the public good.

## COOKING FEED FOR STOCK.

MESSRS. EDITORS—In looking over the numbers of the Co. GENT. for 1861, I find a communication from J. L. R. of Jefferson Co., upon “cooking pumpkins for milch cows,” examining the subject pretty closely, and rather coming to the conclusion that it would not pay. Steaming feed for stock has been for some time a favorite object with me, but I confess his logic has rather shaken my faith. Now I wish to ask you, as you have better facilities for information on this subject than most of us farmers—if one has a good portable boiler and engine, of say ten-horse power; a safe room to put them in as against fire; abundance of water convenient to supply the boiler; ample room to set and use to advantage a straw-cutter, root-cutter, thrasher, and small burr stone, whether it will pay to put them in and use them in preparing and steaming feed for a stock of about fifty head. I ask you, if not asking too much, to write your views as fully as you think the importance of the subject requires. Also, what do you think of the “open stall system,” as a plan for keeping such a stock as I have mentioned?

Lockport, N. Y.

J. W. D.

We do not know of any recent and accurate experiments accompanied with weighing and measuring,

and repeated often enough to remove all accidental results in relation to cooking food for cattle. We believe, however, that the impression among intelligent managers is, that it does not pay—the increased advantage not being equal to the drawback of labor, fuel, and cost of apparatus, or either of these alone. Cattle eat large quantities, chew their cud, and digest coarse matter. With swine the case is different, and cooking is more important. We would never feed grain to cattle without coarse grinding; we would never feed cornstalks without cutting them very short or fine by horse-power, by which double the amount is saved, and every part consumed; and there may be cases where straw and hay may be chopped together, or straw chopped alone for the purpose of intermixing meal, &c.; but when hay is good, and straw fresh and bright enough for animals to eat it freely, (which will always be the case if the grain is cut early enough, well-capped, and the straw properly secured,) there will be little advantage in chopping it.

The mode of sheltering and the kind of stalls used, must depend on circumstances and on the manager's good judgment. It is essential that the animals be entirely sheltered from currents of wind, that both they and their bedding be kept perfectly clean, and that they be regularly supplied with wholesome food, and good air and water. Stabling is the most perfect where strict cleanliness, pure air, and ventilation can be secured; otherwise the owner may adopt the more open system. Some men even denounce cattle-sheds as worse than useless, when an occasional board is knocked off on the windy side, or freezing winds permitted to sweep under the sills—they should denounce such bad sheds, but not good ones. Others are equally earnest in their rejection of stables because manure is allowed to accumulate in them, the animals to become dirty, and foetid air to prevail. It must be a very strong animal that can endure such treatment without injury, and such stables and their management should be denounced, and not all stall management however cleanly.

#### New-York and Ohio Agricultural Reports.

The Transactions of the New-York State Agricultural Society and the Report of the Ohio State Board of Agriculture, for the year 1862, have been received, the former from Col. JOHNSON, the latter from Secretary KLIPPART. The volumes are nearly equal in size—between six and seven hundred closely printed pages each—and are valuable not only as the record of State and County organizations, but also from the light they shed on the condition of the Agriculture of these two important States, and the proof they afford that in the midst of war the arts of peace are not neglected.

To us one of the most interesting features in the former of these works (the general contents of which we have not now room to review,) is the evidence afforded as to the operation of our present State Law for the collection of Agricultural Statistics. More or less complete returns were received, it appears, from twenty-two out of the sixty counties of the State. In only three, Steuben, Cayuga, and Tompkins, were the blanks fully carried out and the aggregates properly footed up. The statistics in other counties, as accurately as they could be compiled, are published also, but

it is evident that little confidence is placed in their entire completeness. Unsuccessful, however, as these results are, as an index to the productiveness of the whole State in 1862, they will not be without usefulness in the localities concerned, and are at least a beginning in the right direction.

Turning now to the Ohio Report, we find the crops of that State fully given, and probably with as great accuracy as it is possible to secure in such returns. We learn from this and the preceding year's Report, that the aggregates of the principal crops of Ohio in 1861 and 1862, respectively, were:

	1862.		1861.	
	Acres.	Bushels.	Acres.	Bushels.
Wheat, .....	2,090,047	29,883,651	1,933,696	20,048,273
Indian Corn, .....	2,175,531	63,014,314	2,269,284	75,308,542
Rye, .....	67,440	823,092	69,266	778,607
Barley, .....	59,128	1,221,170	60,514	1,255,185
Oats, .....	574,047	11,633,058	728,874	17,832,847
Potatoes, .....	81,060	5,128,756	81,155	6,594,922
Meadow & tons Hay, .....	1,571,765	2,073,398	1,462,481	1,711,015

No such table can be made up as to the crops of New-York. Why can we not adopt the provisions of the Ohio law at once, and secure similar returns by making their collection obligatory upon the local assessors? The matter we have never regarded as one that can be committed to the Officers of our Agricultural Societies, (who cannot be held directly responsible in any way for the performance of the duty,) with any hope of entire success. Still we had rather the present law, imperfect as it is, should stand, than that the work should be abandoned. But we sincerely trust that the Legislature about to convene will be disposed to appreciate the value of such statistics, and that such amendments as may seem necessary may be enacted, until we secure an effective, inexpensive and satisfactory system for their collection.

Now Ohio has sent, in all, over 160,000 men to the war. Yet the aggregate acreage of wheat, Indian corn and meadow, the three leading crops, exceeded in 1862 that of 1860 by 56,464 acres and that of 1861 by 176,499 acres. It was a million acres greater than in 1859, the year of late and injurious spring frosts, and 950,000 acres greater than 1858. Will our English friends kindly point to the evidences of "exhaustion" on the part of the North, afforded by such statistics as these? Is there not some pleasure in being able to speak from such authority, and not from "estimates," as to the part the farmers are performing in the redemption of the country?

If the subject of an extended article elsewhere was not of a statistical nature, we should go into these details more fully. Both the volumes referred to are creditable to the Societies from which they come, and so long as such volumes are annually continued, furnishing evidences as abundant as they do, of the prosperity and usefulness of the leading as well as of the lesser and more local agricultural organizations, we may suggest that the assertions recently going the rounds of the papers, to the effect that "Agricultural Societies have had their day"—that they "are rapidly declining," &c., are, to say the least, quite gratuitous and unfounded.

**Heavy Turkeys.**—Mr. S. H. HOWE of Bolton, Mass., writes to the Co. GENT. that his farmer dressed a turkey, which weighed when ready for the table, 28 lbs.; live weight 34 lbs. He says he has young male ones, not quite six months old, from the same stock, which originally came from ETHAN ALLEN, of Pomfret, Ct., whose live weight is 20 lbs.

### Draining of Swamp Lands on Long Island.

As but few experiments have been made in this favored section in draining swamp lands—deemed by many almost worthless—and as what may have been accomplished has seldom met the eye of the farming interest, it will be my endeavor in a brief way to show that few investments will realize better, and that no lands can be rendered more highly productive. The careful farmer, though of a reflective turn of mind, is not usually inclined to experiment, except on a limited scale; yet in the general, if I mistake not, it is only necessary to exhibit a fair probability of profit, to enlist his prompt acquiescence in new enterprises; and it will be a source of great satisfaction, if the following statements shall serve in any measure to awaken new interest in this important branch of agricultural operations.

The land of which I now propose to speak is situated in a valley declining to the west, consisting of about 20 acres, one-third of which was black muck or peat of various depths, the greatest being about 7 feet, the remainder, a heavy slate colored loam, bordering on clay. The sub-stratum was hardpan, occasionally met with in this region, of sufficient closeness to hold water. The tract sloped gently upward right and left from the centre, facilitating drainage. I commenced by opening a main canal from West to East from the lowest point of depression. As the adjacent land afforded but a slight fall, this opening was at first only about one foot deep by three feet wide at top, increasing gradually to the highest point, where it reached the depth of four feet; this became necessary as it took the water from the more elevated fields. This principal channel remains open from necessity, a portion of it which had been closed, being forced open by pressure. It was ascertained that the water which at times entirely submerged the swamp, was derived in part from springs, which were discovered while running the cross drains. These drains were generally at distances of about two rods apart, being from two and a half to four feet deep by six inches wide at the bottom, and eighteen inches at the surface. For one-third of the space I brought into use draining tile of the "horse shoe" pattern; for a part of the remainder I used small stones, and for the balance brush, to which I was obliged to resort in the absence of a firm bottom, and much to my surprise, after a test of five years, this latter work remains sound, and even more reliable than either of the others, discharging copiously, and as yet required no repairs. The result so far is highly encouraging, and with a few additional drains the whole plot will be reclaimed.

Those who were familiar with this swamp in by-gone years would now scarcely recognize the spot. A more forbidding spectacle could scarcely be imagined; the whole being densely covered with sumach, alders, and the usual vegetation incident to such localities, while the higher surfaces contiguous, where thickly overrun with briars of like noxious growths. In fact such was its condition, that portions of it were untrod-den by the foot of man; in confirmation of which, it may be here stated, that while excavating the main channel the remains of two farm cattle were discovered in such positions as to indicate that they had been entangled and mired, without any effort having been made for their recovery. The enterprise was attended at

times with discouragements and it was only by virtue of perseverance, as in all difficult undertakings, that success was eventually attained.

Now, the question may be asked, "why expend so much to recover waste lands, where for an equal outlay improved lands could be obtained?" I have a ready answer, and first the land itself is of the highest value. This is no longer a problem. I have produced corn of the best quality and largest quantity. One-half the area was sown with wheat last year, which was of rank growth and good yield, producing so far as threshed twenty bushels to the acre, and had it not been for the weevil, the result must have been nearly double. It grows celery four to five feet high; cabbages have been taken from it weighing twenty pounds to the head, mangel wurtzel and turnips from limited experience have resulted well. Of potatoes I cannot speak so favorably, the exuberant growth of the vine reducing the size of the bulb. But as grass land I cannot say too much of it. It is true that hardly sufficient time has transpired to give full results. I can only conjecture what might be attained, when I state that after removing the wheat crop, I drew late in the fall from four acres, ten large loads of grass and weeds, which were removed to guard the growing plant from injury. It will thus be seen from the figures, that the investment has proved beyond all peradventure, a profitable one; placing the real value of this land far above the estimate affixed to the accompanying statements; and secondly; apart from the question of dollars and cents, other essential objects have been attained. The whole landscape heretofore marred and unsightly, has been rendered pleasing to the eye, and an object of pleasurable contemplation to the admirers of the beautiful. The surrounding neighborhood has been benefited by additional guarantees to health in the renovation of a fountain of miasma and disease, and lastly it has furnished employment and support to men and families during the usually inactive season of winter, all the labor having been accomplished during that period and early spring.

I submit the following statistics: the cost may appear large, but it must be borne in mind that the entire tract had to be grubbed. The ashes were the product of roots, bushes, &c., gathered and burned upon the ground. I might add much more in detail but I fear I have already transcended my proper limit. I may hereafter take occasion to give further practical results.

The valuation of the land in its primitive state is placed at \$25 per acre, .....	\$500.00
Total expense, (without fence) during five seasons, ...	1,533.16
	<hr/> \$2,033.16

To the credit of which, place 2,000 bushels of ashes at 10 cents, .....	\$200.00
926 cart loads muck at 25 cents, .....	\$231.50
Less expense of hauling, .....	115.50
	<hr/> 126.00
25 loads wood at \$4, .....	100.00
20 acres land, estimated value \$200, .....	4,000.00
	<hr/> 4,426.00

Showing a net gain of, .....	\$2,392.84
Clarence Hall, Great Neck, L. I.	THOS. MESSENGER.

**Stock Sales.**—Among recent movements in Improved Stock, we have to note the sale by C. K. WARD, Esq., of Leroy, Genesee Co., from his excellent Short-Horn Herd, of the following cows and heifers, to J. R. PAGE, for H. G. WHITE, Esq., of South Framingham, Massachusetts:—Bright Eyes 5th, Hope and Hope 5th, and Governess, 3d, 4th and 5th—in all six head, which will be an acquisition to the representatives of the breed in New-England.

## CULTURE OF THE HOP.

Without speaking in relation to the existing plantations of hops, I will in a general way indicate the description of soil to be selected for new ones. The variety of hops also is by no means a matter of indifference, inasmuch as some of the coarser kinds will flourish on soil where those more delicate will not grow at all. The Canterbury, Farnham and the Goldings, are the deepest rooted, and require a deep soil. The other varieties are more shallow rooted, and will grow on a lighter soil. Some growers of hops think best, when the Grape or Kent hop, so called, is grown on a rich soil, to use three poles to a hill, which is a mistaken idea in the culture of hops, for it is not wise to over crowd a field or yard with poles, for it renders the fruit imperfect; and in a wet season, with a viny growth, it frequently happens that the crop is much diminished by allowing too many vines to go up the poles.

After the first year's crop, commencing with the second year's crop, before the poles are set, the earth, by grubbing around the hills, should be removed so as to expose the vines of the preceding year down to the crown of the roots; the old stalk and suckers or offsets which may have sprung from the preceding year should be cut off closely with a sharp knife, leaving the crown of the hill in a convex shape. Cover the hill again with a thin coating of fine earth mixed with manure or other fertilizer, as may be, care being observed at the time to stick up a mark to hills which are weakly, and will require smaller poles. Grubbing and pruning should be strictly adhered to in order to secure a good crop, and prevent the worm increasing. I have experimented on a few acres of hops in order to save labor by not pruning and grubbing, by trying to subdue the worm by using materials that I knew were not injurious to the hop vines. The effects were, the hop began to decrease by the worms working and eating the vines, so much so that some of the vines were entirely eaten off after they had reached the top of the poles. I know no better way than pruning and grubbing for it helps very much in subduing the worms, although many times the worm make such havoc on the vines that it becomes necessary to go through the yard the second time, which is done by working the worm from the hill by a sharp stick. As a general thing the worm is found where the best and thriftiest vines grow, near the bed roots. In the management of hop grounds it may be laid down as a positive rule that the ground should be kept clean from worms and weeds, and the soil kept well enriched.

Madison Co., N. Y.

DANIEL B. SHAPLEY.

## SHADE TREES ON HIGHWAYS.

To shade trees along the highways I object! They shut off the view of the country as you pass—they shade the roads, make them muddy, and produce a mud-hole each; and finally it wont pay. No grain or grass will grow in the shade of a tree, nor within the space occupied by its roots, which is as great in extent as that occupied by the branches—(vide "Co. Gent.") Any crop of grass or grain will pay better. If you knew how important it is in a new and heavily timbered country, to girdle and cut down trees liable to shade the highways, you would be careful about advising New-Yorkers to shade their roads.

ANTL

## Manufacture of Chinese Sugar Cane Syrup.

A short time ago I wrote you concerning the "Chinese Sugar Cane," and endeavored to show you that it was a profitable crop. I will now give our mode of manufacturing, &c.

We use for extracting the juice from the cane, a Victor No. 4, two horse mill, three upright rollers, made at Cincinnati, giving an average run of one hundred gallons of juice per hour. We use Cook's No. 4 Evaporator for boiling the juice. Have boxes made to receive the juice as it comes from the mill, from which we let the juice run on a second pan (which is plain bottomed) set between the first pan and the chimney. The object of this second pan is to warm the juice before it enters on the first pan. By this arrangement we get more good of the heat of the fire, as otherwise it would be useless by going up the chimney. The juice is led by a leader to the front end of the Cook's pan which is over the fire, where by a well regulated fire and continual skimming, you may expect a good article of syrup. Our pans are set on a brick arch, with grates four feet long for the fire. We use good dry wood four feet long, and burn between two and three cords per week, which is sufficient to manufacture three hundred gallons syrup. The quality of the juice by the saccharometer has averaged 8° Baume, but the juice of the cane I wrote of, stood at 11°. Have made forty-four gallons syrup from three hundred and fifteen gallons juice. Made our molasses very thick—averaged 40° by saccharometer.

We find that the rapider the boiling the brighter will be the syrup. We find also that by the addition of a second pan we can make from ten to twenty gallons more in a day with the same fire than without it. Have made sixty gallons in eleven hours from the time of starting the fire.

And now as to cost of establishment, &c. A Cook's No. 4 pan will be \$90, a No. 4 mill \$100, besides buildings, &c. We have our mill in the center of a large six-pole barrack; our pan in a small house built for it, so that we can work, rain or shine. It requires three hands, one to carry cane to the mill and to carry the crushed cane away; one to feed the mill with cane, and one to attend to the pan. The crushed cane is excellent to keep a barn-yard dry underfoot, but does not make much manure. The skimmings are made into vinegar in the West. We do not use them. Fed them to the hogs last year but it made them sick.

Readington, New Jersey.

JOHN FLEMING.

**Importation of Cattle into Canada.**—We learn that the City of Quebec Agricultural Society, which though few in number of members, and young as a Society, promises well,—has imported from England during the season of 1863—two thorough-bred animals—viz., one Short-Horn bull, "Sweetmeat," roan, calved in 1861; bred by Mr. Robinson of Clifton Pastures, England; got by Duke of Leinster, (17724)—dam Sweetheart 2d by Earl of Dublin, (10178) &c., being a direct descendant of the famous cow "Sylph." Also the thorough-bred horse "Canwell," by Stockwell out of May Bell; bred by Lord Northport. By last accounts from England, Stockwell was standing for £100 a mare. Both these animals are now in Quebec for service, at low rates, the Society wishing only to pay expenses.

## HON. Z. PRATT'S DAIRY FOR 1863.

Col. PRATT kindly furnishes for the COUNTRY GENTLEMAN the following statement of his Dairy Farm at Prattsville, Greene Co., for the year 1863. The average number of cows (of what are called "natives") in milk, was eighty, and the following figures cover the usual dairying season of about eight months:

MILK.		
	Pounds.	Gallons.
Whole Product,.....	362,871	46,731
Average per Cow,.....	4,535	584
Average per Day,.....	1,343	173
Average per day for each cow,.....	16 7-10	2 1-10
Greatest average in one day per cow,...	25.2	3.2
BUTTER.		
Whole product,.....	17,976 pounds.	
Average per cow,.....	224.7 do.	
Average per day,.....	66.5 do.	
Average per day for each cow,.....	13.3 ounces.	
Average milk to 1 lb. butter,.....	20 1-10 lbs. or 10 3-10 quarts.	
PORK.		
Amount made,.....	10,389 pounds.	
Average pork for each cow milked,.....	129 do.	
SALES.		
Butter, at 27c. per lb.,.....	\$4,853.52	
Pork,.....	571.39	
Calves,.....	16.00	
Poultry,.....	119.94	
Deacon skins,.....	60.00	
	\$5,620.85	
Expenses of working farm, over proceeds of same, not enumerated above, including \$700 for interest on investment of \$10,000 in farm and stock,.....	1,916.45	
Net profit,.....	\$3,704.40	
Amount realized for each cow:		
For Butter sold,.....	\$60.66	
For Pork sold,.....	7.14	
	\$67.80	

## OTHER PRODUCTS.

1,107 bushels of Corn in the ear from 8 $\frac{1}{4}$  acres.  
 1,500 bushels of Carrots and Beets.  
 139 loads of Pumpkins.  
 80 tons of Hay.  
 100 bushels of Oats.  
 \$54.16 value of Honey sold and on hand.  
 \$74.00 value of new hives of Bees' increase.

The size of the farm, as heretofore referred to in Col. PRATT's reports, was 365 acres. The present season 30 acres additional of pasturage have been in use. The largest number of cows kept at any one time was one hundred, but the average was eighty, as above stated.

The average of butter per cow in Col. PRATT's dairy, for 1862, as will be seen by reference to the statement published last year, was 223 pounds for each of 64 cows. The present season this very high average has been exceeded slightly—about 1 $\frac{1}{4}$  lbs. per cow—but the number of the cows has been enlarged from 64 to 80, so that the large product they average is still more remarkable now than then. The gross return of the farm is also increased this year as compared with former reports, by the higher price at which the butter has sold.

## The Best Way to Preserve Celery.

EDS. CO. GENTLEMAN—I raised my first crop of celery the past summer, and being entirely ignorant of the mode of preserving it for use during the winter, I carefully examined every number of your paper as they arrived, for information upon this subject, which, being summed up was, "digging trenches," some place out of door—"sinking barrels," do., etc. The "Trench" suggested the following experiment:

I have built a new ice-house above the ground—two wood walls 12 inches apart, and filled all round and on top with sawdust. F've feet from one end I made a

partition, (double as the others,) intending the small room for a milk-house. In this I dug a trench and walled with brick and water lime, to hold the drippings from the ice. Well, not expecting to use this room before spring, I dug my celery (a month ago) and placed it in this ditch, placing under and around each row some of the same soil in which it grew—only on the surface I placed a layer of tolerably dry sand, leaving the tops out. Of course this room is ventilated by openings in the walls and overhead.

The result is, my celery is keeping splendidly, and has every appearance of growing, and I see no reason why it will not keep any length of time and grow. One advantage this plan has, is: I can go, in all kinds of weather, and remove the soil from as many plants as is needed for the table, without the least additional trouble. It never freezes in this room.

Now why cannot lovers of this plant build a little house at a very few dollars expense after this plan, expressly for their celery? J. M. CULBERTSON.

Danville, Ill., Dec. 15, 1863.

## Recipes for Yeast, Cookies and Crullers.

**Yeast.**—Boil a small handful of hops in three pints of water, for an hour. At the same time boil two medium sized potatoes. When done, put the potatoes into a colander, with a tablespoonful of flour, one of sugar, and one of salt. Strain the water from the hops into the colander. If it has boiled away so there is not a quart, add sufficient boiling water to make a quart. Mash till it has all passed through, and let it stand till lukewarm, then add half a pint of good yeast. It must rise until bubbles begin to appear on the top, then bottle and cork tightly. It should stand in an earthen dish to rise. Yeast made in this way will keep in a cool place for three weeks.

**Cookies.**—One cup and a half of sugar mixed with half a one of butter. Stir into it a cup of milk, (sour is the best,) and flour to make a batter; then add a teaspoonful of saleratus dissolved in a little water, a tablespoonful of ground cinnamon, and just enough more flour to enable you to roll it out. If stiff they will not be good. Bake as quickly as possible. They will keep two or three days.

**Crullers.**—Stir together three tablespoonfuls of melted butter, and two cups of sugar. Add two well beaten eggs, a cup of sweet milk in which a teaspoonful of soda has been dissolved, a teaspoonful of ground cinnamon, and flour with two teaspoonfuls of cream tartar till thick enough to roll out. Fry them in hot lard.

Should these prove acceptable, it is very possible that at no very distant day you may receive some more from

CLARA.

## VICAR OF WINKFIELD PEAR.

JAMES OLIVER of Lynn, Mass., in a recent letter remarks, "We had no apples this year, and not a large crop of pears, but what few we had were valuable. The Vicar of Winkfield has done itself credit this year, being a *very* good eating pear with me, and I think I have discovered the reason why. I became disgusted with it a few years ago, and cut off two-thirds of the wood and grafted the stumps, which prevented its over-bearing, which is *the secret*. Reduce the top and you will have a fair crop of delicious pears—in place of an average crop of half-ripened fruit."

We may add that it is essential that this pear be thoroughly ripened on the tree, and hence it should not be picked until the moment it is ready to drop from the branch, or until threatened with freezing weather. We have the present season good eating fruit of this variety in every instance where the crop

was allowed to hang late, or where the pears have dropped on the ground after full maturity.

There is no fruit so much affected in quality by management, as the pear; and some sorts which are rejected as worthless when grown in grass land, or without cultivation and pruning, become excellent under the best treatment, and the two crops, under these opposite modes of management, would not be recognized as the same variety. Those who raise pears largely for market, will find a distinct trade to learn in the art of raising, picking, keeping, and putting up for market—in some instances of five to one in price.

#### WATER FOR BEES.

Much has been said within the last few years concerning the proper management of bees during the protracted, inhospitable reign of winter in Northern latitudes.

Experience has demonstrated that in order to render bee-keeping a success in cold regions, the bees must be specially cared for, so as to mitigate what is to them an ungenial climate. Notwithstanding these circumstances, perhaps more than nine-tenths of all the bees throughout the Northern States, remain on the stands upon which they were situated when first hived, and their condition for even surviving until the return of vernal flowers being wholly unknown to their keepers, who will count themselves "lucky" if, perchance, their gains should exceed or even balance their losses.

The object of the generality of persons who keep bees, is profit, which might be greatly augmented were they properly managed. In order that this branch of industry may be successfully conducted, it is highly important that the apiarian should be fully acquainted with the instincts, habits, propensities, peculiarities—in short, the nature of these wonderful and useful little insects. By knowing these, he will be enabled to meliorate their condition and afford them facilities for rendering to their possessors rich and ample returns.

Hitherto one fruitful cause of "ill luck," attending bee-keeping in cold climates and consequent upon the long and inevitable confinement to the hive, is their want of water, or in other words water-dearth. That bees cannot raise brood without water, has been known to a few persons for at least a century. If bees, while weather-bound, are not incidentally or otherwise supplied with it at the regular season for raising brood, the breeding will not only be retarded, but if supplies of moisture fail during these periods their brood will be sacrificed in any stage of development.

After a rigorous winter, should foul weather continue to prevail, old bees in great numbers, and even whole colonies, perish in consequence of this dearth, which may occur here and there, earlier or later, and in more or less injury.

The author of Nature has given the bee an instinct to store up honey and pollen, which are not to be procured at all times in any climate, but not water, which is ever accessible in her native regions. Hence the loss of bees by water-dearth is the result of climate, because it is contrary to the original instincts of the bee to dwell in Northern climates.

The consumption of water by a stock of bees, commences so soon as the queen begins to lay, which occurs in some colonies early in January. This however varies, depending on the vigor and favorable condition of each several swarm. The most critical period is during March and April, when the rapidly increasing amount of brood causes an increased demand of water.

The particular use or uses which bees make of water, remains one of the "mysteries of the hive." In the

raising of brood, however, its agency is that of a diluter, indispensable in the forming of honey and pollen into jelly for feeding the larvæ.

The amount of water consumed by a colony during any given period, has not been definitely ascertained by the writer in his own experience. This point, however, has been duly determined by that prince of modern apiarians, the Baron of Berlepsch. The Baron says "that in 1856, during a protracted period of unfavorable weather, we gave all our bees water, and they remained at home in quiet, while those of other apiarians were flying briskly in search of water. At the beginning of May, our hives were crowded with bees, whilst the colonies of our neighbors were mostly weak." "One hundred stocks required eleven Berlin quarts per week, to keep on breeding uninterruptedly." "Dysentery is one of the direct consequences of water-dearth, the bees in dire need of water consuming honey immoderately, and taking cold by roaming about the combs."

For the translation of the Baron's (German) experiment we are indebted to that highly accomplished friend of apiculture, Mr. SAMUEL WAGNER of York, Pa.

It is said, that "in the Isle of Wight the people have a notion that every bee goes down to the sea to drink twice a day." Thus it will be seen that bees are unable to progress with the raising of brood without the daily consumption of water for that purpose. Indeed, the commonwealth of the hive, in consequence of a dearth of water, are brought to the verge of ruin. Furthermore, that the Creator did not arrange for the storing up of water by bees; therefore, they are not susceptible of being naturalized to cold climates. Hence it ought not to be expected that they should thrive and flourish in a regular prosperous degree except it be by culture from the intelligent supervision of the apiarian.

Bees, when confined by stress of weather after breeding has begun, can obtain the water they need only (if duly ventilated) from the watery particles contained in the honey. A knowledge of these facts reveals not only the truth and nature of a natural obstacle to success, but also the mode of counteracting it. Thus, by feeding bees limited quantities of honey and sugar, largely diluted with water at short intervals during March and April, they promptly store up a very dilute honey from which they get adequate supplies, in ordinary contingencies. This affords them all the facilities needed to "multiply and replenish" the hive. Herein consists the means by which, and only so, the ultimatum of success is attainable.

Bee-keepers who have given any attention to feeding colonies, unite in affirming that stocks thus fed swarm 10 to 14 days earlier than they otherwise would. This is of paramount importance, as the few days thus gained in the honey-moon, secures to first swarms some fifty per cent. more stores, besides affording after-swarms like benefit. The cause of these advantages have generally, through misapprehension, been ascribed to the incitement produced by the saccharine contained in the feed, while the water, though overlooked, is evidently the chief cause, as judicious feeding will produce the like effect with colonies having an excess of honey, as those possessing limited stores of it.

Many bee-keepers still manage bees according to the popular notions, which consists in hiving the swarms when they issue, and giving them a careful letting alone, thus expecting to follow Nature by counterfeiting wild bee-keeping. Those who persist in this, of course will not be benefitted by experience or anything which might be published. Indeed, the sooner these traditioners' bees run out, the sooner will this wild crude practice become extinct, and a new era of a rational system of culture will be the happy result.

The seeming difficulty of executing this care, has much to do with its universal adoption. The writer having had no inconsiderable practical experience with bees, beginning while bee-keeping was in its pristine state, is aware that the undertaking of these manipulations seems very much like offensive warfare, and to no one any more so than originally with himself, but none are now less timid in this "labor of love" than he is.

Richford, Tioga Co., N. Y.

C. J. ROBINSON.



THE CANADA THISTLE—*Cirsium arvense*.

This is a formidable weed in two respects. It spreads extensively by seed, and the roots being both perennial and creeping, the plants quickly extend into patches beneath the surface. The roots have been sometimes found several feet below, in porous sub-soils; and as the fragments of roots are sufficient to produce new plants, it was formerly supposed to be incapable of eradication, without digging out every portion, which, in a large patch, would involve immense labor. This opinion has now been found to be fallacious, and by the observance of a simple principle, the whole subterranean net-work of roots may be easily destroyed. *The roots cannot live, unless they breathe through their lungs, the leaves.* Keep the portion of the plants above ground from growing, and the whole patch may be destroyed in a single year. This may be accomplished in several ways. Small patches may be smothered by covering them with boards, closing the joints with a second layer, to prevent a single plant from finding its way through. Sawdust, tan or straw, will accomplish the same end, if laid on thick enough. If a single plant, however, escapes, it will sustain life in a portion of the roots. Another way is to cut the plants off daily even with the surface of the ground, so that a single leaf cannot grow. The best way for common practice is to plow them under, and continue the plowing often enough to keep them smothered. If well and deeply done, once a month will answer the purpose. This mode succeeds best on heavy or clayey soils, which do not permit the thistles to find their way readily upwards. But even on such soils, the work must be very carefully performed, for if a portion of the weeds are but partly covered, they cannot be destroyed. On gravelly and other porous soils, it is more difficult to destroy them by plowing. The operation must therefore be more frequent on such soils, and greater care taken to do it deeply and in the most thorough manner. The Double Michigan plow will be

found to answer an excellent purpose on these as well as all other kinds of soil.

#### RAISING SMALL FRUITS.

As I wish to get several acres of my farm out in small fruits, and not having as much experience as some of your readers, I wish to know through THE CULTIVATOR, the proper time of taking cuttings of different kinds of berries—gooseberries, raspberries, currants, the quince, &c.; and the best and surest time to put them out. Also the preparation of the ground. A READER. *Twenty Mile Stand, O.*

Cuttings of the currant, gooseberry and quince should be taken off in autumn after the growth has ceased, or, at latest, early in winter. The shoots should be of last season's growth, and shaved closely to the old wood. They may be eight inches to a foot long. We have found them to succeed best when set late in autumn, and mulched an inch or two with fine, fresh manure. If left till spring, they should be kept through winter packed in moist sand or earth, or fine, compact, damp moss, and be set out very early. One side of the trench should be made straight with the spade and line, the cuttings set along this side, and the earth trodden compactly as the trench is filled in, so as to leave no interstice. We have found it of great importance in raising French quinces from cuttings, to keep the ground mulched with fine, fresh manure from the moment they are set out till the end of summer, the shoots being allowed to project an inch or two above ground when inserted.

The soil should be rather compact than otherwise, having a perfect drainage, and never wet. The surface should be kept mellow under the mulch, and the weeds not allowed to grow.

Raspberries are commonly raised from suckers—some of the American sorts by layering the tips of the shoots. Small cuttings of the roots have been extensively employed for propagating new sorts. The bottom heat of a hot-bed or propagating-house applied to these cuttings buried shallow in pans or boxes, gives them a start in winter, and they are set out the following spring in nursery rows.

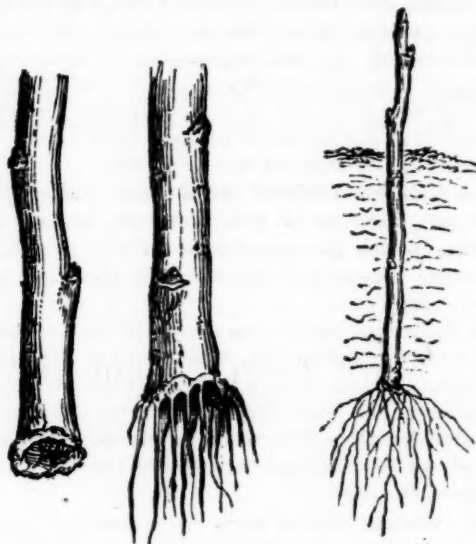


FIG. 2.

FIG. 1.

FIG. 3.

We give the annexed cuts to show our young readers the manner in which cuttings form roots. Fig. 1 is the lower end of a cutting with a callus formed upon it, produced by the descending juice of the inner bark. Fig. 2, the same, with roots protruded; and fig. 3 shows a gooseberry or currant cutting entire, the buds below ground having been shaved or rubbed off.

## HINTS ON HORSE STABLES.

There are several particulars connected with the healthy keeping of horses, as well as the neat arrangement of horses and carriages, that should never be overlooked or forgotten. Among these are—

1. Pure air for the animals to breathe.
2. Plenty of light.
3. Convenience for ready and frequent feeding.
4. Separation of harness and carriages from the stable part.

5. Perfect cleanliness throughout.

Pure air can only be secured by cleanliness and perfect ventilation. The stables should be cleaned at least three times a day, and plenty of clean dry litter freely used. Some will be startled at this required frequency, but they should remember that the amount thrown out is no greater than if done once a day or once a week. It is easier to keep a thing clean than to purge it after it has become foul. The boy who combed his hair but once a month was greatly terrified when it was proposed to him to do it daily, as it nearly cost him his scalp at each operation.

Ventilation is secured by broad apartments, high ceiling, partitions between stalls only as high as horses' backs, a feeding alley in front of the manger, and one or more ventilating tubes passing through the loft and roof above. A stout wire extending from the stable to a rolling-valve or shutter at the top, enables the attendant to open or close this valve according to the severity of the weather. Any one who has never made the observation or comparison, will be surprised at the difference between the pleasant, pure air of a stable kept in this way, and another, low, close and uncleaned, and filled with foetid and ammonical vapors, which no animal can safely breathe, and which is a fruitful cause of disease. We do not, however, mean to commend the practice which some, not less slovenly adopt, of allowing cold winds to blow in cracks between boards and under badly-shutting doors.

There are two reasons why stables should be well lighted. The attendant is more likely to keep every part clean, and the animal's eyes are not liable to the injury occasioned by bringing them out from a dark apartment to the full blaze of day.

Convenience for ready and frequent feeding is important on several accounts. Food should be given often and in small quantities at a time. Horses will then eat the whole, and it will be better for them than if large quantities are thrust into the box or manger, to be covered with the condensed breath of many hours. If the feeding alley is in front of the mangers, the work may be done more conveniently and with less annoyance to the horses. This arrangement also admits the manger to be cleaned daily, if required, for which purpose also it should be just high enough to be easy of access both to horse and attendant.

An air-tight partition should separate the stable from the carriage department, in order that no dust may pass to the latter, and also to prevent the escape of vapor from manure, which, even in small quantities, will affect the varnish and injure harness.

The accompany figure represents a small carriage-house and horse-barn (fig. 1) in tended for a single carriage and single horse, (fig. 2,) or of the smallest practical size. It is intended to carry out most of the pre-

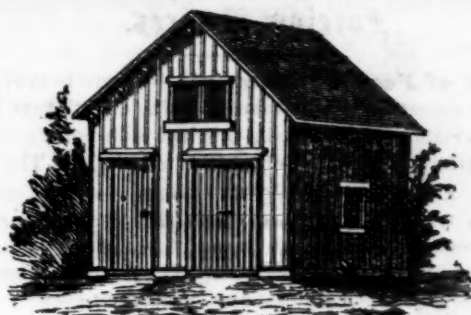


Fig. 1.

ceding recommendations, and may be enlarged according to the wants of the owner. The stairs ascend from a separate apartment, so that hay and dust cannot reach the carriage and harness; and the partition be-



Fig. 2.



Fig. 3.

tween the stall and carriage room prevents the passage of dust and odors to the latter. Under the stairs is a small granary for holding oats; or a grain bin may be placed in the loft above, the bottom being hop-

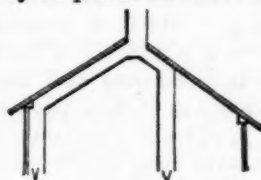


Fig. 4.

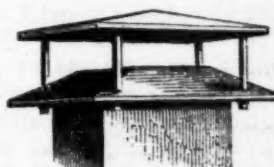


Fig. 5.

per shaped, with a discharging tube at the lowest angle, the feed may be obtained without ascending the stairs, by means of the discharging box (fig. 3) shown in the annexed figure, which always contains grain without running over, so long as any remains in the granary above.

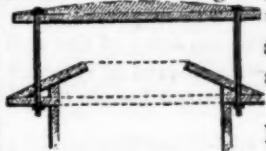


Fig. 6.

The mode of carrying ventilating tubes up from the roof to the peak is shown in fig. 4, and a good form for ventilating caps outside is shown, view and section, in figs. 5 and 6, which will always draw the air upwards whenever the wind blows. In these the rolling valve is not shown, being placed below.

## Dressing for Strawberries.

"Supposing the land to be in good vegetable bearing condition, and deeply dug, I know no dressing which will so delight the strawberry, as a heavy coat of dark forest mold. They are the children of the wilderness, force them as we will; and their little fibrous roots never forget their longing for the dark unctuous odor of mouldering forest leaves."—*Mitchell.*

## Covering Seed.

"As a general rule the depth of covering should not exceed two or three times the shortest diameter of the seed; this plainly involves so light a covering for the lettuces, parsley and celery, that a judicious gardener will cover by simply sifting over them a sprinkling of fine loam, which he will presently wet down thoroughly, (unless the sun is at high noon) with his water pot—medicated with a slight pinch of guano."—*Id.*

### Foreign Notices.

**Value of Feeding Materials.**—There is much interest in ascertaining the relative value of different feeding materials, and a note in our last number furnishes information as to different kinds of grain. The last Scottish Farmer has quite an elaborate article on Oil cake, in which the writer states the following as its feeding value, relatively to beans, peas, barley and oats, and also of beans and peas relatively to oats and barley:

1 cwt. oil-cake is equal to  $1\frac{1}{2}$  cwt. of beans or peas.

1 cwt. oil-cake is equal to  $1\frac{1}{2}$  cwt. of oats or barley.

1 cwt. beans or peas is equal to  $1\frac{1}{2}$  cwt. of oats or barley.

In other words, three pounds of oil-cake are equal to four of beans or peas; and four pounds of oil-cake to seven of oats or barley. He does not take into account whatever difference in quality of manure there might be in favor of the cake. But one consideration he presents is equally true here, except in the immediate vicinity of oil mills, namely, "that in country districts generally, if we sell grain and buy oil-cake, we sell in the cheapest market and buy in the dearest; we pay the highest price for what we buy, and receive the lowest price for what we sell."

**Helps and Hindrances of Agricultural Progress.**—This was the subject of a paper read last month before the Society of Arts by Mr. Morton, the distinguished agricultural author. He treats the subject at great length and with much labor and detail—his chief object being to show, as he states in conclusion, that "agricultural progress is chiefly dependent—first on the improvement of our means of agricultural education; and, secondly, on the business relations of the farmer being placed on a sounder footing." He took occasion to prove at the outset, by quoting a number of testimonials and opinions of practical farmers and land agents of long and large experience in various parts of England, that the agricultural produce of that country is now much larger than it has ever been before—that the fertility of the land is increasing—and that both in bread and meat of home produce it is really better off than formerly, notwithstanding its imports of food have also largely increased in order to supply a better fed and larger population. The causes of this progress have been, 1. Better tillage; 2. The greater richness of home-made manures, and the greater use of imported fertilizers; 3. The development of the capacity of the soil by improved rotations, together with improved varieties of the cultivated crops; 4. The improved breeds of domestic animals.

**Manure Management.**—In the paper just referred to, Mr. Morton says: "The increased adoption of the practice of applying manures at once to the land instead of rotting it in heaps is an economy, and so an addition to our resources worth naming. The increased practice of feeding and collecting manures under shelter is another economy. The increased care to properly pulverize and even dissolve manures, so as to distribute them thoroughly through the soil, is another first-class example of a most important improvement in farm practice."

**Increased Precocity of the Improved Breeds.**—On this point Mr. Morton remarks that while owing to liberal and vigorous cultivation, more tons of cattle food are now produced in England, annually, than ever hitherto, yet it is not so much to this as to the improved sorts of cattle, sheep and pigs that the increased produce of animal food is justly to be ascribed:

"Our sheep are now ready for the butcher at fourteen months old—our cattle at twenty-four and thirty months. Formerly, it needed at least two years of feeding to make a smaller carcass of mutton, and at least three or four years' feeding to make a smaller carcass of beef. A thousand sheep upon a farm in March or April now

mean something like 500 ewes in the lambing fold, and 500 sheep ready for market. Formerly they meant not more than 300, and those a smaller lot, ready for the butcher; and this great increase in the meat produce of a given head of stock is witnessed as much in pork and beef as it is in mutton."

**Premium Turnip Crops.**—The committee of the East Lothian (Scotland) Agricultural Society, on the Turnip Crops of 1863, after examining the fields entered for competition, awarded the premiums as follows:—Swedish turnips to Mr. Sadler, Ferrygate; weight per imperial acre, 28 tons, 19 cwt. 6 st. Yellow turnips to Mr. Hope, Fentonbarns; weight per imperial acre, 36 tons 11 cwt. The Marquis of Tweeddale entered for white turnips, but a part had been lifted before the judges inspected them, and the stipulated quantity of five acres was not left. The judges, however, tested what was left, and found the weight to be 45 tons per imperial acre. His Lordship's turnips were the grey-stone variety.

**Steam Cultivation.**—The practical success achieved in Great Britain in plowing or otherwise breaking up the ground by steam power has been frequently noticed in our columns. From recent statements we learn that one firm in England is now sending out four steam plowing engines per week, which in February next will be increased to one per day, and that another firm has already sold 300 sets of cultivators. Mr. HOPE, of Fenton Barns, East Lothian, who was one of the earliest Scottish farmers to introduce the reaping machine, has been equally prompt in securing a steam plow, and, judging from the notices of the papers during the past season, has been highly gratified with its use. The commendation of so excellent a judge and careful a farmer as Mr. H., will go farther with his "cannie" countrymen than half-a-dozen prize awards from the Agricultural Societies.

**Feeding Values of Grain, etc.**—In answer to an inquiry, the editor of the Irish Farmer's Gazette states that "45 lbs. wheat are equal to 54 lbs. barley, 59 lbs. oats, 54 lbs. rye, 57 lbs. Indian corn, 69 lbs. linseed-cake, 374 lbs. wheat straw, 195 lbs. oat straw, 100 lbs. hay, 276 lbs. carrots, 504 lbs. common turnips, 350 lbs. swedes, 339 lbs. mangels." A table given in Vol. 3d of RURAL AFFAIRS (page 226) does not differ very widely from these figures, giving for example, 43 lbs. wheat as equal to 56 of Indian corn, 59 of oats, 46 of beans, &c. Farmers in some parts of England are now feeding wheat to their cattle in considerable quantities, as it is relatively cheaper than other material, and the foregoing statement may enable some of our farmers to judge whether they can judiciously follow the example. Meantime have any of our readers tried feeding wheat? We should be glad of replies from those who have done so.

**The Devons—Size of Different Breeds.**—Indications may be noted among breeders of Devons in England, tending to show a general desire, and some effort toward slightly increasing the size of this very symmetrical and compact breed. If this can be done, without sacrificing any other of its well known merits, much may be added to its popularity in America. In the North West for example, many stock farmers have a predilection for the Devon, only complaining that it does not reach quite the weight they can best produce. The samples of this breed at the late Smithfield Club Show, it is stated, were larger than usual. For the sake of comparison, we give the admeasurements of the first prize oxen of the different breeds:

	FIRST PRIZE OX UNDER THREE YEARS.		FIRST PRIZE OX. OVER THREE YEARS.	
	Girth.	Length.	Girth.	Length.
DEVON, .....	8 ft. 1 in.	4 ft. 8 in.	8 ft. 4 in.	4 ft. 10 in.
HEREFORD, .....	7 ft. 8 in.	4 ft. 9 in.	9 ft. 4 in.	5 ft. 6 in.
SHORT-HORN, ....	8 ft. 6 in.	5 ft. 4 in.	9 ft. 1 in.	5 ft. 6 in.
SCOTCH POLLED, ..	.....	.....	9 ft. 8 in.	5 ft. 4 in.
LONG HORNED, ....	.....	.....	8 ft. 1 in.	5 ft. 1 in.

Here the Devons certainly compare favorably with others.

### Protection to Orchards and Gardens.

The idea is often advanced, "that our seasons have changed." The weather is not now as it was forty or fifty years ago, when good peaches were grown in all parts of our country, except in portions of some of our most Northern States; and south of New York they attained the highest state of perfection. But within the last fifteen or twenty years, in some sections where they once flourished, they cannot now be grown at all; and even further south, where trees were often met with in perfect health thirty or forty years old. Now the crop is extremely uncertain, and the trees scarcely survive ten years. The same influences that have so seriously affected the peach have also proved injurious to other fruits, and even farm crops, have, in some degree, suffered from the same cause. The question then arises, what has caused these meteorological changes? Undoubtedly it may be traced to the general removal of the native forests over a wide extent of our country. In early times thousands of acres of timber were destroyed in the process of clearing land for agricultural purposes. In later years a more thorough clearing has been caused by the great demand arising for fuel to supply the numerous railroads that traverse the country in every direction. This widespread clearing of the timber has not only affected the temperature of the atmosphere, but it is the direct cause of the sudden changes that mark the seasons in later years. Nor is the effect confined to the colder portions of the year. Summer showers are less frequent, and many of the mountain streams are either dried up or much reduced in size. No general remedy can be devised for these changes, yet in many localities means may be employed for the partial protection of orchards, gardens and dwellings, from the effects of the severest winter winds. This may be done, where the nature of the surroundings will admit, by planting belts or groves of trees on the most exposed sides of the homestead. These may often be rendered both ornamental and useful.

Where land is abundant, fast growing varieties of deciduous and evergreen trees may be planted in such a manner that in a few years they will not only shield the orchard and garden from the winds, but a very pleasing effect may be produced by the combination and arrangement of the trees. Upon the wide prairies of the West, in thousands of localities, where almost universal nakedness prevails, such protection is still more important; and with a general adoption of the plan here proposed, the whole aspect of that beautiful region might be greatly improved, not only in appearance, but in the health and comfort of the people. Among the trees suitable for the purpose, as fast growers, may be named the Chestnut, Wild Cherry, the Maples, the Cork-bark or Dutch Elm, Silver leaved Poplar, and many others. There are, however, several other fast growers, but from various causes are objectionable. Among the evergreens suitable may be named the white and other pines, hemlock, spruce, &c. Upon smaller premises, where land cannot so well be spared for *unproductive* trees, the apple may be planted to serve the double purpose of a wind-breaker, and for the fruit they will produce. The exposure to which these trees will be subject may sometimes cause a failure of the fruit; but by a selec-

tion of the most hardy varieties they may generally be expected to bear more or less.

By a good preparation of the soil, and cultivation for a few years, such trees may be brought to considerable size, so as to answer the end desired. The trees should be planted but about half the distance apart that is usually assigned for the orchard—say about 20 feet, and set in three or four rows, in quincunx order; one tree affording a certain degree of protection and support to another. The fruit produced by them, if not equal in size and quality to that produced in trees more favorably situated, would be valuable for stock, or for making cider and vinegar. This subject is worthy the attention of every farmer, whose lands are situated so that some protection of this kind can be adopted.

H. P. B.

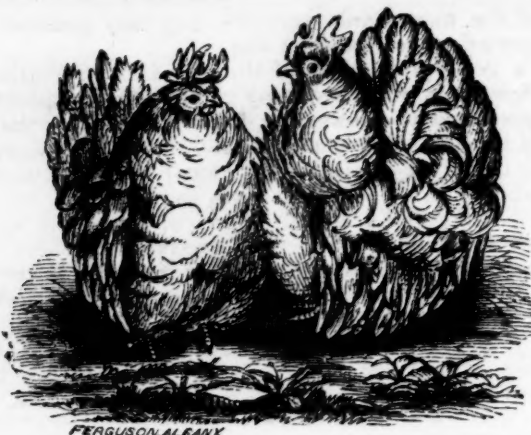
### REPAIRING TOOLS IN WINTER.

By good management the labor of repairing tools is much lessened. Selecting the strongest and best made, and using them with reasonable caution, breakages would rarely occur. We do not mean to say that tools could be as perfectly constructed as Dr. Holmes' "One-Horse Shay," which lasted a hundred years, and then fell to pieces in a moment at every part, so perfectly was its strength equalized throughout; but a careful selection from the best manufacturers will prevent many of the accidents which happen to implements and machines made by bunglers. Large farmers cannot always secure careful hands, and good implements must therefore be occasionally broken. Repairing, therefore, forms a considerable part of every farmer's business. Some of this may be done at home with little trouble; in other cases it is best to employ at once a mechanic, especially for repairing all large articles, such as thrashing machines, wagons, plows, &c. A little skill will often be quite useful, however, in winter, and on stormy days, in repairing smaller tools and implements, and for this purpose a supply of proper materials should be always at hand. One of the most useful articles is copper wire. It should be kept of different sizes. It is one of the strongest metals except iron; does not rust through, and is almost as flexible as leather, allowing it to press closely and fit the parts, and twisting in a close coil. Wherever portions of wooden tools are split, a few bands of copper wire will effect a substantial repair in a few minutes. Next to copper wire, in value, are strips of sheet copper. These are very useful on larger pieces of wood, split plank or split timber. Lay the strips of copper across the fracture, or pass them around in the form of bands, and then secure them to their places by driving in small nails, and great strength will be imparted. If the wood is very hard, the points of the nails should be dipped in grease, which will cause them to drive freely.

When copper wire cannot be had, very strong bands may be placed around fractured rods of wood as follows: Procure the smallest sized annealed iron wire, (not much larger than horse-hair, which, although so small, is very strong,) and use it so as to form a neat band around the fractured rod; then heat the wire in the flame of a lamp, turning it over, so as to warm every part alike, and then apply a stick of burning sealing-wax to the band, afterwards heating and melting the wax thoroughly into the wire, by turning it in the flame. The iron and wax thus become thoroughly incorporated together, and form an exceedingly hard, strong and durable band. This is an excellent mode for mending canes, umbrellas, &c.

Prepared glue is a very useful substance to keep on hand, for mending all small wooden tools and vessels. It is easily made by dissolving good glue in alcohol in a large-mouthed bottle. In a few days the glue will be perfectly diffused through the alcohol, and the mixture ready for use. If too thick add more alcohol; if too thin, allow it to evaporate.

Almost every practical farmer may add some suggestions to these directions, the results of his own experience. These suggestions we should be glad to receive from any of our correspondents.



JAPANESE FRIZZLED BANTAMS.

Since the commercial intercourse with Japan has been opened to the outer world, many very singular and curious specimens of vegetable and animal productions have been introduced both into England and this country. Among the latter are the newly introduced variety of frizzled or crisp-feathered Bantams, which were exhibited with other specimens of Bantams from the same country, at a Poultry Show in England in 1860.

Its name of "Frizzled Bantam," is given, probably, from its grotesque and singular appearance—its feathers being crisped and projecting outward, giving the appearance of having been drawn through a knot-hole wrong end foremost, which is well delineated in the above figure.

They are like the inhabitants of their native country, a very singular race of fowls; their legs are represented as being no more than one inch in length; their feathers very curiously frizzled, resembling the style of dressing the hair of the ladies in ancient times. Their short legs and erect position, give them a rather unique appearance, not unlike some of our owl species.

Of the particular merits or value of these fowls as layers and breeders, we have no account, as none as yet have been imported into this country, and it is but a few years since they were first introduced to England from their native country. The presumption however is, they are not unlike many other varieties of fowls, and should be regarded more as fancy or pets than useful or profitable poultry.

C. N. BEMENT.

#### My Potato Crop—How Managed and Result.

My land lies level and handsome—quick soil, mixed with gravel and loam, which had been occupied in the culture of hops for six years, and manured each year with barn-yard manure. I also used lime one year, salt one year, and leached ashes three years—all in the six years. Early in the spring of 1863 I removed the hop poles from three-fourths of an acre, plowed nine inches deep, and smoothed the ground with a harrow, and marked the rows for planting, three feet apart, with a light plow. I used nine bushels of seed, mostly Garnets; hoed them once, harvested early, and received 180 bushels of fine potatoes in return, which, at seventy-five cents per bushel, would bring, \$135.00. The cost of preparation, labor and interest on land, was as follows:

Interest on $\frac{1}{4}$ acre of land at \$150 per acre, ....	\$7.87
Five loads manure, .....	3.13
Ten bushels lime, .....	2.00
Two bushels salt, .....	40
Nine bushels potatoes for seed, .....	6.75
Plowing and harrowing, .....	2.50
Planting and hoeing, .....	4.00
Harvesting, .....	4.00

Deduct cost, ..... 30.65

Profits on  $\frac{1}{4}$  of an acre, ..... \$104.35

Hamilton, N. Y.

D. B. SHAPLEY.

#### STANCHIONS vs. CATTLE TIES.

In your issue of Nov. 26, you give an article from L. F. SCOTT, headed "Stanchions for Cows," in which he describes his stables, which I should judge were quite well arranged for the kind. But in behalf of the cows, allow me to inquire why have this cruel apparatus at all? It has always seemed to me to too much confine the animal. Look at the natural position of a cow when laying down and taking her repose. Her head invariably is brought around against her side, which of course cannot be done when stanchions are used. A better way, in my humble opinion, is to use the chain cattle ties, (shown in the annexed figs.) that fasten about the neck and move freely up and down on an upright timber or iron.



Get good strong chains that are fastened with a T, and not with snaps, and they will give you little trouble and always be ready. If you use a set of ropes and tie around the horns, it will not give the animal so large a liberty, and the probabilities are that your ropes will most of them be missing about once in six months, whereas the chains will prove to be more of a permanent fixture, as they are not so readily used for every occasion. WM. J. PETTEE. Salisbury, Ct.

#### SOWING CORN FOR FODDER.

Your correspondent, WILLIAM J. PETTEE, well remarks in a late number, that "the only wonder is that no more of this kind of fodder is raised, especially by our eastern farmers, where hay is worth from \$12 to \$20 per ton." I have yearly cultivated this crop for twenty years, and am well satisfied of its value and importance. It may be sown during the vacant days immediately after corn planting, and harvested between wheat cutting and seeding. When sown thick enough, it does not bear grain nor exhaust the soil, but rather enriches it by the roots it leaves behind,—according to the experiments I have made in raising for successive years on the same land, without manuring. It should never be broadcast, producing weeds; but always in furrows, at the rate of forty grains to a foot, or three bushels per acre, allowing the cultivator to pass twice afterwards, requiring no hoeing, smothering the weeds, and leaving the ground as clean as a floor. It is usually sown too thin, grows too tall and coarse, and cattle will not eat all the stalks. If sown thick enough, its growth will be lower or shorter, but it will yield much more per acre, and the stalks will all be eaten clean. For this reason I question the propriety of sowing the large or Dent corn.

On land that will yield thirty bushels of corn per acre, I get four tons per acre of dried stalks, and such as will yield forty or fifty bushels, yields about six tons. Any soil will raise it; and I have found it one of the best crops to put grassy or rough lands into order, as the summer cultivation between the rows, and the dense smothering influence of the crop itself, together with the mass of small fibres it leaves in the soil, makes the ground clean and mellow.

J.

## NOTES ON SHEEP, SWINE, &amp;c.

A recent call at the farm of JAMES FITCH, near Union Springs, N. Y., afforded an opportunity of examining some of his fine animals. He is one of the best farmers of Cayuga county, has for some years given special attention to draining, and makes farming "pay." He raises the Berkshire swine, preserves the full blood, and prefers them to any other. He thinks they possess the advantage over the Suffolk of affording more muscle and less oily matter, while they increase more in weight with the same feed than most other breeds. He has some fine animals, estimated to weigh about 400 lbs. each. His flock of sheep is chiefly the Spanish Merino, with some Silesian. He shuts them up at night, and allows them to run in the yard during most of the day. The racks from which they are fed extend around the inside of the enclosure, and consist of a space three feet high above the top of the sill, two feet wide at the top, and ten inches at the bottom. The upper part in front is a wide board, to the lower side of which the upper ends of the slats are nailed, and the lower ends to the sill of the building, the slats being fifteen inches long, two inches wide, and two inches apart. A trough, six inches wide, projects in front at the bottom, and prevents the waste of hay and admits feeding with grain. Another kind of movable rack is placed in the centre of the apartment, which will be figured and described on a future occasion. This flock of sheep was in excellent condition; the animals yield very fine wool, about five and a half pounds each, on an average, and a part of them, although not full bloods, have received offers of \$12 each. The owner attends to them personally, which he considers an important requisite, both in saving a large amount of hay, and a still larger amount in flesh and condition.

We drove a mile farther to see the fine stock of J. A. PATTERSON of Aurelius. He has many fine grade Durham cattle, and some full bloods; a handsome young colt from the celebrated Patchin horse; an excellent flock of sheep, which, having been removed to another farm, we did not see, and a large number of Chester White swine, both grade and full blood; and a flock of large bronze turkeys, from Page's stock, of Sennet, most of them of last spring's origin, weighing between 20 and 30 pounds. He thinks turkeys do well on large farms, feeding on grasshoppers, and requiring little attention. The owner thinks that when regularly fed with prepared grain, the Chester Whites yield more flesh than the Berkshires for a given amount of food; but that for ordinary management, where swine are permitted to run more at large and pick their own living, the Berkshires, being hardier and tougher, will grow and fatten to the best advantage, but the best animals, of all he has found to be a cross of Suffolks and Chester, or rather three-quarters Chester and one-quarter Suffolk. The crosses between the Chesters and Berkshires are also excellent animals, and are nearly always entirely white.

A valuable service would be rendered the farming interest, if accurate experiments could be tried with separate lots of these different breeds of swine, by weighing the animals weekly, and observing which would manufacture the most pork from a given quantity of food. Farmers too often make their selections by giving the preference to such breeds as grow largest, without reference to the amount of food they will consume.

J.

## DENT CORN.

Your correspondent W. J. P., not being able to reconcile the conflicting statements in regard to Dent corn, asks for further information. In answer to his inquiry I would say that the past season I raised the Dent corn successfully in Fairfield Co., Conn. The seed was procured from Illinois, about latitude 41°.

I also raised the large Yellow Flint and King Philip. The Dent corn was planted late, 26th May, (some days later than the other kinds,) and was cut Sept. 22. The result was decidedly in favor of the Dent corn—ripening fully, a better yield, and less unsound corn than with the other kinds. On the 17th of Nov. I shelled and weighed one bushel basket of ears of each, which gave, Yellow Dent 39 lbs.; King Philip 32 lbs.; Yellow Flint 28 lbs.

It seems to me the conflicting opinions expressed, have arisen from overlooking the fact that there are many varieties of Dent corn. That the large southern Ohio corn will sometimes fail to ripen in the northern counties of that State, as your correspondent affirms, is undoubtedly true, but it is equally true that the genuine Dent corn is successfully, and I may add exclusively raised in northern Illinois, and even in Wisconsin, in higher latitudes than northern Ohio. M. A.

## FARMER'S BOOK KEEPING.

Many and various are the plans shadowed forth by writers in our agricultural journals, as a guide to farmers in keeping an account of the operations of the farm. Some of them are very short and simple, while others are long and complicated. Some would have a daily account of farm work, and open an account with every field, and recommend the use of a blotter, day book and ledger. All this, if carried out fully, would make a nice thing of it; but are all these things necessary to obtain the true working of the farm? What may be necessary in extensive commercial operations, is not so in the limited operations of the farm. All these minutiae of book keeping would require no small amount of labor, more than most farmers could devote to such an object. Every person doing business should keep some account of it, so that he can tell at the end of each year whether he has anything to carry to profit or loss. The neglect to do this is the cause of many failures. It is of the first importance that every person doing business should settle with himself once in a year. I have pursued the following course for many years, and found it satisfactory. In the first place I keep a cash account with myself, and balance the account once a month, to see if the disbursements and cash on hand correspond with the receipts, and correct omissions. I keep a dairy account, wherein I note all the sales, date, price and to whom sold, so as to compare one year with another; also the gross amount of sales of the several products of the farm; the amount paid for labor or coarse grain to feed, mechanic's bills, &c. I settle all accounts made during the year, on the first of January of each year, noting the amount of debtor and credit if unpaid. With the above brief method I find no difficulty in satisfying myself at the end of each year, whether I have anything to carry to profit or loss.

HIRAM WALKER.

—•••—  
Calmness is the very essence of order.

### DISTANCE FOR DWARF PEARS.

In answer to the frequent inquiries on this subject, we advise planters to give more room than is usually assigned to dwarf pears. For a few years, while the trees are young, no inconvenience is perceived in the ordinary distance of seven or eight feet; but as the orchard becomes older, the trees crowd on each other and render the thorough cultivation, which is so absolutely essential to the success of dwarf pears, difficult or imperfect. Besides this the roots interfere with each other to a greater extent than is commonly supposed. It is a mistake that the quince roots remain in a small and circumscribed circle; on the contrary we have found them to extend long distances in good and well cultivated soil, or nearly as far on each side of the trunk as the height of the tree. Hence, there is no doubt that dwarf pears, planted eight or ten feet apart, cover the whole area of the ground with their numerous fibres in four or five years at furthest, and before the trees have attained half their final size. Give the roots plenty of room, and the trees will be better and healthier, and the fruit handsomer and finer flavored. A successful cultivator, who planted his dwarfs eight feet apart, seven or eight years ago, has now come to the conclusion that he has crowded them too closely together, and he recommends a distance of not less than twelve feet, although he keeps his trees in proper shape and within bounds by pruning. Where land is limited and high-priced, and trees are cheap, they may be set nearer together, as a temporary arrangement for making the most of the land at the start,—to be thinned out subsequently when they crowd each other. But even here the loss must not be forgotten which is occasioned by the exhaustion of the soil in supporting the growth of so many trees.

### DWARF APPLES—INQUIRIES.

1. At what age will most varieties begin to bear on Paradise stock?
2. The same on Doucin stock?
3. At ten years of age, which will yield the most fruit, an acre of Baldwins on Paradise, on Doucin, or on free stock?
4. From your experience with the dwarf apple do you think that it possesses any advantages over the standard, and if any, what?
5. Do you think that the dwarf apple can be profitably planted for the purpose of growing fruit for market? If yea, please to state your reasons, and upon which stock, Paradise or Doucin? If nay, please state your reasons.
6. Do you find that any varieties of apples do not succeed well on the Paradise, and if so, which?
7. Same on Doucin?
8. Do any varieties succeed better on Paradise than on Doucin, and vice versa?
9. In planting an acre of dwarf apple on Paradise, what distance do you recommend?
10. Same on Doucin stock?

You will much oblige me by giving a full and complete answer to these inquiries.

St. Catharines, Canada West.

D. W. B.

1, 2. Dwarf apples on Paradise begin to bear at about 3 years of age from the bud—the Doucin at about 4 or 5 years. Some varieties will obviously bear sooner than others; and feeble or stunted trees sooner than vigorous ones.

3. We are not aware that this experiment was ever tried, and we have no distinct data on which to fur-

nish an answer. As the Baldwin bears profusely, even as a standard, when young, the same number of well-grown standards at ten years would probably bear the greatest crop, but as many more on the Doucin stock could be planted on an acre, the 300 or 400 of the latter on an acre would doubtless greatly exceed at ten years the forty standard trees.

4. As the dwarf apple bears sooner than the standard, it is well adapted to new residences, especially for furnishing a supply of summer and autumn fruit. Dwarf apples are well adapted to gardens and limited grounds, as they do not, like standards, overgrow and shade everything near them; and many more can be planted on the same limited extent; as, for example, some 600 trees on Paradise stocks might be easily planted on an acre, and 300 or 400 on the Doucin; while a quarter acre garden therefore would hold only ten standards, it might receive a hundred or more dwarfs.

5. Ordinarily, standards will be much the best for marketing—but there may be rare instances where very fine early sorts, near cities in regions where such sorts are rare, may be quickly raised for marketing. Their low heads admitting the safe picking of the fruit without injury.

6, 7, 8. All varieties appear to succeed equally well on these two stocks—strong growers will, of course, be the strongest when thus worked, and vice versa. The best varieties for dwarf stocks, as a general rule, are those which naturally form a round or oval head. Such will need but little pruning. Among these are the Red Astrachan, Jersey Sweet, Porter, Baldwin, Dyer, Monmouth Pippin, Summer Rose, Benoni, and Sweet Bough. There are others that incline to grow upright and need some pruning to prevent their running upwards, and to induce spreading; among these are the Northern Spy, Twenty Ounce, Lady Apple, Wagoner, Early Strawberry and Bailey Sweet, all of which make handsome dwarfs. There are again others, although not so handsome growers, yet the ornamental appearance of the fruit renders them desirable dwarfs, as the Fameuse, Red Canada, Carolina Red June, Munson Sweet, &c. There are still others, which grow so irregular that some care would be required to make handsome trees of them, such as Fall Pippin, Canada Reinette, and Tompkins County-King. Dwarf apples should be mostly confined to summer and autumn varieties, in order to furnish a fresh supply for the table of the most desirable sorts.

9, 10. Eight feet apart for Paradise, and twelve feet apart for Doucin, which is a greater distance than writers have usually given, but we are not sure but more space would be better. The trees may be kept within bounds by pruning, or allowed to grow large, according to circumstances, but as a general rule there should be a considerable space between the trees, allowing the free circulation of air, admitting light, and favoring the free extension of the roots.

It is obviously important that they should have a good soil, and be kept well cultivated. A great advantage of dwarf apples over dwarf pears is that every variety may be raised in this way—while out of many hundred sorts of pears, only a very few are adapted to dwarf cultivation, and determined by many years' experience.

## RHUBARB OR PIE-PLANT.

It is asserted that the apple in its highly improved state, and in its numerous varieties, had its origin in the wild sour crab—that the peach is only the bitter almond, improved with care and cultivation—that the potato had its origin in the poisonous nightshade. The wonderful improvement in these fruits is hardly greater than that which has taken place in the rhubarb since its introduction as a culinary vegetable. The numerous improved seedlings of this plant, with their large tender leaf-stalks, had their origin in the medicinal plant of Turkey. When first introduced for the table, it still retained much of the medicinal flavor of the Turkish root, but by perseverance in cultivation it finally became much improved, when a new and more valuable variety was introduced, first in England and then into this country, known as Myatt's Victoria. From this it continued in steady gradations of improvement until the new seedling known as Downing's Colossal, was produced in our own country, by Mr. Charles Downing of Newburgh. This proved a superior variety, with stalks large, round, and tender, of high flavor, rich in aromatic juice; cooking as tender as the best apple, requiring twenty-five per cent. less sugar than any other variety then known. While this improvement had been reached in our own country, Mr. Myatt of England, produced his celebrated seedling called Linnaeus, combining all the excellence that could be desired in a plant of this kind, and in some respects superior to that produced by Mr. Downing, and requiring still less sugar in its preparation for the table. While in England there is an absence of a supply of the various fruits which abound in the United States, the rhubarb in its improved state is chiefly depended on to make up the deficiency, and has now become one of the largest products of the London market-gardeners. Hundreds of tons are annually required to supply the demand. Our own country is much better supplied with apples and other fruits than England, yet there is a period of several weeks in the spring, between the old and the new crops of fruits, when the pie-plant is largely used by all good house-keepers, and it has become a product of extensive demand in most of the large city markets.

**Cultivation.**—Of late years but little attention has been given to this product in the agricultural papers, in regard to its culture or its preparation for the table. To grow the pie-plant in its greatest perfection, a deep, rich, mellow soil is required. In setting the new plants, the roots should be divided into single eyes, which will produce much better stalks than when two or more are connected together. With care and good cultivation, the product may be expected in its greatest perfection the second spring after planting.

**Gathering.**—Generally the stalks should not be gathered until the leaves have arrived at near their full size. At this stage they not only contain all the good qualities of the plant, but less injury is caused to the root than when gathered at an earlier period. The stalks should not be cut, but should be pulled off by hand, with a slight sudden twist sideways, when the separation will take place just above the junction with the root.

**Cooking.**—The great excellence of the pie-plant depends much upon the manner of cooking, yet the pro-

cess is most simple. The coarser kinds require peeling, but with the improved sorts, like the Colossal and Linnaeus, this is not necessary. When cut into short pieces, but a few minutes stewing is required, when it is reduced to a creamy impalpable pulp; longer stewing tends to the development of the acid, and dissipates its fine aromatic properties. When sweetened, it may be baked in tarts, or used as apples are in the form of sauce, or otherwise.

This subject has been suggested at this time, by reading an article in the COUNTRY GENTLEMAN, by "A Constant Lady Reader," charging that the use of this vegetable had a tendency to injure the teeth, which has called forth several articles in vindication of the plant. Fears upon this point may be regarded as entirely groundless. It is asserted by those familiar with the chemical properties of the plant, that the acid which the stalks contain is similar to that contained in the apple and other garden fruits, and no more injurious to the teeth than those fruits are. I have eaten the plant every year from its earliest introduction into the country to the present time. I am ten years the senior of "D. B.," who writes to the COUNTRY GENTLEMAN of Dec. 17, who claims that he can bend a silver quarter, or break a sixpenny nail with his "canines," yet I would not exchange teeth with him or with any other man of my age in America. While I claim that the pie-plant is not injurious to the teeth, it may be asserted that its moderate use is beneficial to the system generally, acting as a tonic and aperient, without being too laxative, promoting a healthy action at the same time upon the kidneys and bowels.

H. P. B.

**Otsego County.**—The annual meeting of this Society was held at Cooperstown, Dec. 16th, when the following gentlemen were elected officers of the Society for the ensuing year:

**President**—G. POMEROY KEESE.

**Vice-President**—Wm. I. Compton.

**Secretary**—H. M. Hooker.

**Treasurer**—F. U. Johnson.

**Directors for Three Years**—Alfred Clarke and J. R. Morris.

The display of apples was large and fine. There was also a good display of dressed meats and poultry.

**Cayuga County.**—At the annual meeting, Dec. 19th, the following officers were chosen:

**President**—A. M. CLARK, Fleming.

**Vice-President**—H. Macomber, Fleming.

**Secretary**—John G. Hosmer, Aurelius.

**Treasurer**—L. C. Mann, Auburn.

**Directors**—Israel E. Phelps, Cato; Charles P. Wood, Wheaton S. Leach, Auburn; Wm. D. Osborne, Mentz; John B. Shank, Springport; Oliver Freeman, Scipio.

**Franklin Co., Mass.**—Officers for 1864:

**President**—EDMUND W. STEBBINS, of Deerfield.

**Vice-Presidents**—Nelson Burrows of Gill, Rominor Smith of Coleraine.

**Secretary**—Austin DeWolf of Greenfield.

**Treasurer**—Edward W. Russell of Greenfield.

**Hampden Co., Mass.**—We are indebted to Mr. Secretary BAGG for the neatly printed Transactions of this Society for 1863. The year appears to have been a prosperous one. Officers for 1864:

**President**—WM. BIRNIE, Springfield.

**Directors**—Wm. Pynchon, C. L. Buell, H. M. Sessions, J. S. McElwain, R. Brooks, H. E. Mosely, P. Stedman, Chas. Fowler, and C. S. Newell.

**Secretary and Treasurer**—J. N. Bagg.

**Hampshire, Franklin and Hampden, Mass.**—

A. P. Peck, Treasurer, supplies us with the proceedings of this Society for 1863, comprising Committee Reports, &c. We note that at the last exhibition a string of Fat Cattle was shown from the town of Westfield, consisting of thirteen pairs of large and handsome oxen, the aggregate of whose weight was 52,000 lbs., an average of over 4,000 lbs. per pair, and weighing respectively, 4,680, 4,560, 4,300, 4,200, 4,100, 4,000, 4,000, 4,000, 3,950, 3,700, 3,700, 3,500, 3,400 lbs. Nine pairs of these were owned by Charles and John Fowler, two by Frederick Fowler, one by George Taylor, and one by Hezekiah Taylor.



ALBANY, N. Y., FEBRUARY, 1864.

At the time the January number of THE CULTIVATOR went to press, we were not prepared to speak, except in general terms, of our arrangements for the current year.

They are such as must add materially to the interest and usefulness of this journal. Among others, Hon. HENRY F. FRENCH, so long and widely known, not only from his occasional articles heretofore in our columns, and in the *Horticulturist*, while edited by the lamented DOWNING, but also from his long connection with the *New-England Farmer* as a Corresponding Editor, and from his excellent treatise on *Farm Drainage*, will hereafter contribute regularly for us—having last year resigned his connection with other journals. This, not only to our New-England readers, but all others, will be welcome intelligence; for Judge FRENCH's tastes for rural pursuits, not less than his long experience at home, and careful observation of Foreign Agriculture, qualify him peculiarly to speak as an authority on any subject he may discuss.

On Horticultural subjects, moreover, JAMES VICK, Esq., formerly editor of the *Genesee Farmer*, and publisher of the *Horticulturist* while that periodical was issued at Rochester, will hereafter be enrolled among the number of our contributors. Mr. VICK has also dissolved his connection with other journals, and we hope to hear from him frequently.

It has not been formally announced, but many of our readers may have already known that H. P. BYRAM, Esq., long the leading editor in Kentucky of the *Valley Farmer*, has been one of our regular correspondents during nearly the whole of the past year. A number of articles from his pen are now waiting insertion, and as there is no writer more familiar with the agriculture and horticulture of the West than Mr. B., his contributions will be looked for with great interest by Western as well as Eastern subscribers.

Our custom has been in the past to leave the contributions we have secured, to the judgment of the agricultural public, without any parade of names or statistics of the number of those who write for us. And while such will continue to be our rule in the future, it is not inappropriate for the publishers to remark, in view of the claims of their contemporaries in these respects, that while they continue to enjoy the co-operation of such assistants and contributors as J. J. THOMAS, Prof. S. W. JOHNSON, LEVI BARTLETT, Dr. ASA FITCH, S. EDWARDS TODD, C. N. BEMENT, and several others, together with the three gentlemen above named—not to speak of their hundreds of voluntary correspondents in every State and Territory—the COUNTRY GENTLEMAN and CULTIVATOR can scarcely fail to maintain the rank so long assigned them as the Leading Agricultural Journals of America.

The subscriptions thus far received for 1864, although not as numerous as in some previous years, still place us under obligations to many friends, old and new, for their efforts in our behalf. But there is scarcely a Post Office to which THE CULTIVATOR is sent where a

very little exertion might not readily double the present list. We invite every reader to take part in extending its circulation, as his time and inclination may permit; and to this end we shall cheerfully send specimens to any one asking for them, as well as a copy of the ANNUAL REGISTER, strictly for use in canvassing, where required for the purpose.

Additions to Clubs may of course be made at Club rates; and to any present subscriber who cannot make up a full club of ten, we will, during the remainder of the season, supply five copies of the CULTIVATOR and REGISTER for \$3, to encourage the formation of small clubs where we have now only one or two subscribers.

See Terms, Premiums, &c., as published in full on page 71 of the present number.

**Wool Growers' Convention.**—The Convention of Wool Growers at Columbus, Ohio, Jan. 5th, appears from the brief accounts thus far published, to have been well attended. On the first day there was a spirited discussion upon the three questions, How best to protect sheep from dogs? Is washing sheep advantageous? Is the tariff on foreign wool adequate protection to the American producer? These questions were well discussed by Gov. Brown of Massachusetts, Mr. McClung, Mr. Montgomery, Mr. Bell, Mr. Cunningham, Mr. Delano and others of Ohio. In the evening there was an address by Col. Needham of Vermont. The next day was occupied by the session of the Ohio State Board of Agriculture, and, in the evening, by an address from Dr. Randall of New-York. The organization of the Ohio Wool Growers' Association was fully perfected by the election of a President, Vice President, Secretary, Treasurer, and Board of Directors. Regular meetings of the Association are to be held in Columbus the first Tuesday in January, and during the Ohio State Fair at the place where the State Fair is held.

**United States Agricultural Society.**—"The annual meeting of the United States Agricultural Society was held last Wednesday, in the Smithsonian Institute, Washington. Mr. B. B. FRENCH was elected President for the ensuing year, with one Vice-President from each of the loyal States; BENJAMIN PERLEY POORE, Secretary; and JOSEPH F. BROWN, Treasurer. Executive Committee—Isaac Newton, Commissioner of Agriculture; John Jones, Delaware; Frederick Smyth, New-Hampshire; Ward H. Lamon, Illinois; W. B. Todd, District of Columbia; James S. Grinnell, Massachusetts; J. R. Dodge, Ohio.

"A resolution was adopted favoring an exhibition of stock, agricultural machines, products of textile fibres, wool, products of sorghum, native wines, &c.; also a resolution commending the system for the collection of statistics adopted by the Department of Agriculture and the publication of reports. The meeting then adjourned till the 24th of February."

**A Good Cow.**—The following is the weight of beef from a cow slaughtered on the 18th inst.: Short-Horn cow Picotee—calved July 1, 1857, got by John O'Gaunt 2d (13089;) dam Willey 5th by American Comet, 1196—had a fine bull calf Dec. 27, 1862, and was soon afterwards reduced to a skeleton by milk fever. Recovering, was well kept, but not highly fed until spring—ran on ordinary pasture until fall, and was then fed until the 18th of Jan., 1864—a small cow, not estimated to weigh over 1,100 alive, in good ordinary condition. No means of ascertaining her live weight:

Two fore quarters, 209, 209, .....	418 pounds.
Two hind quarters, 212, 214, .....	426 do.
Beef, .....	844 pounds.
Loose fat, 109—hide, 72, .....	181 do.
	1,025 pounds.

**Improved Farming in Albany Co.**—A friend of ours, in this county, began farming some 20 years ago. His farm would then produce 20 tons of hay for sale, and eight for home consumption. This present season he has sold forty-three tons, and has enough left to winter 675 sheep, with his farm horses and other stock. The size of the farm, we believe, is about 100 acres. Its productiveness has been increased by the system of stock feeding we have so long advocated, together with draining where most necessary. The number of sheep mentioned above, are fattening for the late winter or early spring market. Notwithstanding the high price of Indian corn and all feeding material, and the tempting inducement to sell more hay, when it commands \$22 or \$23 a ton, the sheep will be fed as freely as ever. There is no success in half-way work, as our friend understands; and the consequence is, he is the most successful sheep feeder within our acquaintance in this or any other State.

**Winter Pears.**—JOHN MORSE of Cayuga Bridge, has for many years been engaged in the business of raising and selling pears for the market, including chiefly the older or more common sorts. He states that, on the whole, he finds the Winter Nelis the most profitable of the winter varieties, as under good cultivation and training it grows to a fair size, bears well, and is invariably of excellent quality. The Winkfield is not good enough, but is a fine winter cooking variety. He has not tried the Lawrence. The Virgalieu has become so liable to crack, as to have lost its former high reputation. One of the best things, doubtless, where Virgalieu orchards have been planted is to re-graft them with the Winter Nelis—the Virgalieu being a straight, handsome, thrifty grower, forms a fine standard stock for the irregular and crooked Winter Nelis.

**Blanketing Horses in Winter.**—This is often wrongly done. When the horse becomes heated by hard labor or long travelling, the blanket is thrown on his back at once—the vapor streams up from his hot sides, becomes condensed and wets the blanket, and as the horse continues to cool, the cold and wet covering is of little use. A better way is to allow the animal to stand uncovered for a few minutes, a longer or shorter period, according to circumstances, until cooled down to about the ordinary temperature, (but not in any degree towards chilliness.) Then throw on the dry blanket.

**Pennsylvania Agricultural College.**—The catalogue of this institution, to the progress of which in public favor we have on several occasions called attention, has been just issued for 1863, showing a total of 142 students in the various departments—a larger number, says the President, Dr. PUGH, "than have been during the same time in attendance upon any other agricultural college in this country or Europe." Among them we note a number from New-York and other States, and we believe, so long as the full capacity of the institution is not reached by students from Pennsylvania, that those from other parts of the country will be received with pleasure.

It appears that the completion of the college buildings is now so nearly reached that no farther interruption to the regular course of studies may now be expected from this course, a fact, which, together with the measure of public confidence already won by the long and earnest efforts of Dr. PUGH and his associates, will doubtless soon avail to attract the full number of students for whom accommodations can be provided.

In answer to several inquiries as to the location of the college, it may be added that it is in Center County, Pa., and may be reached by the Pennsylvania Railroad to Lewistown, Spruce Creek, or Tyrone. From Spruce Creek a stage leaves on Tuesdays, Thursdays and Saturdays, passing the College for Bellefonte, and returns on

the intermediate days. Stages run daily from Lewistown, and cars run twice a day from Tyrone to Bellefonte; from which place the College is readily accessible by the Spruce Creek stage, or by livery accommodations. The Post-Office address of the President is Dr. EVAN PUGH, Agricultural College, Center Co., Pa.

**The Genesee Farmer.**—L. TUCKER & SON: I have just received the last number of the "Genesee Farmer," and perceive that its editor and publisher still claims that it is a continuation, or in other words, is identical with the original Genesee Farmer. On referring to a former number, I perceive also that my name is used in the attempt to prove this claim. The facts are simply these: On the removal of the old Genesee Farmer to Albany, and about a year after I had ceased writing for it, M. B. Bateham requested me to assist him in establishing a new paper at Rochester, to take the place of the old one. I told him I could not do so if it assumed any claim as a continuance, but that it must be openly and distinctly understood to be a new paper, and that the name must be new. This he fully agreed to; but I felt somewhat disappointed when he finally adopted the name "New Genesee Farmer," but felt better satisfied when he, as publisher, agreed to insert the following, which he did, in the first number:

"Editors and others will observe that this is not 'The Genesee Farmer,' which was formerly published here by LUTHER TUCKER. We do not wish to build upon the reputation of that paper, but expect to stand upon our own merits alone, and hope that the Editors with whom we exchange, will be careful to give credit, and to address their papers to the New Genesee Farmer."

I continued in connection with the paper for nearly two years, and was sorry to observe on two or three occasions during that time, that some correspondents seemed to claim it by indistinct inference as a continuation. It fell, successively, into several other hands; the distinctive word "New" was dropped, and a step was thus taken towards claiming the merits of the original paper. I stated these facts, a few years ago, to J. HARRIS, the present proprietor, and was surprised to observe that he had recently assumed again the original claim, although he says "it is no sort of consequence whether the Genesee Farmer is, or is not, the oldest agricultural paper in America"—that is, a continuation of LUTHER TUCKER's paper. But while he thus virtually continues to assert, what is a matter of "no sort of consequence" to him, it is a matter of great consequence to LUTHER TUCKER, the original publisher; for it was this original Genesee Farmer that was the pioneer of the present agricultural literature of this country, as fitted to the wants of the great mass of the farming community, and it was this that has established his claim as the original founder of this kind of periodical literature.

The only claim of identity in the two publications, is that the latter was published subsequently to the former, and in the same city. To show how slender this claim is, let us suppose a parallel case. "The Fruit Garden" (by P. Barry,) was first published by Charles Scribner, and afterwards by C. M. Saxton. The author having withdrawn it from publication, suppose that I should issue another work, call it "The Fruit Garden," publish it by Appleton, and claim that it was a continuation of Barry's original work. This claim would of course be regarded as perfectly absurd, (even if I should obtain some of his original matter,) yet I should have the same claim in substance that the present Genesee Farmer has, namely, that of being published subsequently, and in the same city. J. J. THOMAS.

**Corn Cobs.**—The editor of the Maine Farmer gives it as his opinion that corn cobs, (ground of course,) are useful when fed to animals that chew the cud, while for those who do not chew the cud, he does "not value them very highly."

**Prolific Corn.**—I want to tell your readers of a prolific stalk of corn that I raised the past season. The ground on which I fed my hogs last winter was plowed in the spring, and planted to potatoes. In one of the drills a single grain came up, and was tended the same as the potatoes. The parent stalk threw up three suckers, two of which and the parent stalk produced three fine ears of corn, from which I snelled 2,137 grains of corn. The birds destroyed at least one hundred more from the ends of the ears that projected from the husks. Is not that a match for your prolific bean?

Urbana, Ill.

J. J. H.

**Heavy Turkeys.**—I see in your last issue, a notice of "Heavy Turkeys." I had one killed on 24th ult., which weighed, after bleeding and with head off below wattles, 40¼ lbs. His dressed weight was a fraction over 30 lbs. Age about 20 months. One I killed a year ago weighed, dressed, 31¼ lbs., and was in much better condition (fatter) than the one of this season, although his live weight was less. The stock I procured a few years ago of H. S. Ramsdell of Connecticut.

Indianapolis, Ind.

C. S. HINES.

**Product of Three Rods.**—In the summer of 1857, the writer raised in Wisconsin, on a small fraction over three rods of ground, the following quantity of the articles named:

2 bushels Turnip Beets.	4 bushels Onions.
1 do. Tomatoes.	15 do. Swedes Turnips.

On the same ground were nine pie-plant roots, second year from seed; three young cherry trees, one currant bush, and four hills of beans. The land was new, only having been broken up the year before. No manure was used.

F.

**Short-Horn Purchases.**—*Eds. Co. Gent.*—You will remember that something more than a year since, I applied to you for advice where to go to purchase thoroughbred stock. Following your directions, I purchased last spring the young bull "Orpheus," 5051 A. H. B., of Mr. George Butts of Manlius, N. Y., and within a few weeks I have also purchased his prize cow "Bright Eyes 6th," bred by S. P. Chapman; got by "Halton," 556, (11552,) out of imported "Bright Eyes 3d," by "Earl Derby," (10177,) &c. They are both eminently first class animals, and I selected them with special reference to each other's points as breeders. I believe cattle will pay for raising in less than five years, with all the hue and cry about sheep at present.

J. L. INGALSBE.

South Hartford, N. Y.

**Breeders' Association.**—This Society will hold its Sixth Annual Meeting at Worcester, Mass., March 2d, as will be seen by its advertisement in another column. It has been gaining ground in public favor, particularly in New-England, ever since its establishment; and the Records of Improved Stock published under its auspices have been heretofore noticed at length in our columns. The meeting will doubtless attract a full attendance of members and others interested.

**The Annual Register for 1864.**—J. C. A., Butler Co., Iowa, writes:—"Like all its predecessors, it is a gem in appearance, and rich and comprehensive in matter. The article on 'Dairying' is alone worth the price of a year's subscription to the COUNTRY GENTLEMAN."

**Meat for New-York.**—The total number of animals of all kinds marketed in New-York in 1863, was 1,924,898—of which 263,229 were beef cattle. Of this number 119,181, more than half, were from Illinois—28,921 from New-York—19,477 from Ohio—13,837 from Indiana—8,963 from Iowa—8,850 from Michigan—6,709

from Kentucky—1,504 from Missouri, and the remainder from other States in numbers less than 1,000.

In 1860, the total number of animals marketed in the city was 1,107,882—in 1861, 1,387,327—in 1862—1,845,605, and in 1863, as stated above, 1,924,898.

**Vermont State Ag. Society.**—At the annual meeting of this Society, held at Bellows Falls Jan. 7, the following officers were elected:

*President*—EDWIN HAMMOND, Middlebury.

*Vice-Presidents*—J. W. Colburn, Springfield; H. Keyes, Newbury; Daniel R. Potter, St. Albans; H. G. Root, Bennington.

*Secretary*—Daniel Needham, Quechee.

*Directors*—Frederick Holbrook, Brattleboro; E. B. Chase, Lyndon; H. S. Morse, Shelburn; John Gregory, Northfield; Elijah Cleveland, Coventry; Nathan Cushing, Woodstock; Geo. Campbell, Westminster; Henry Hayward, Claremont; Wm. R. Sanford, Orwell; Wm. Q. Brown, Fair Haven.

Their next State Fair is to be held Sept. 13—16, the place to be hereafter designated.

**Connecticut.**—The Annual Meeting of the Connecticut State Agricultural Society was held at Hartford last week. The following officers were elected for the year ensuing:

*President*—E. M. HYDE of Stafford.

*Vice-Presidents*—Robbins Battell of Norfolk, and D. F. Gulliver, of Norwich.

*Directors*—C. M. Pond, Hartford; B. H. Andrews, Waterbury; Henry Bill, Norwich; George C. Hitchcock, New Preston; R. B. Chamberlin, Coventry; Eliakim Hough, Bridgeport; H. L. Stewart, Middle Haddam, and B. F. Sumner, Woodstock.

*Corresponding Secretary*—Dr. T. S. Gold, West Cornwall.

*Recording Secretary*—W. W. Stone, New-Haven.

*Treasurer*—F. A. Brown, Hartford.

*Chemist*—Prof. S. W. Johnson of Yale College.

**Illinois State Hort. Society.**—At the late annual meeting of this Society at Alton, the following officers were elected:

*President*—SMILEY SHEPHERD, Hennepin, Putnam Co., Ill.

*Vice Presidents*—O. B. Galusha, Vice President at large; Jonathan Periam, Thornton Station, Cook Co.; C. N. Andrews, Rockford, Winnebago Co.; A. R. Whitney, Franklin Grove, Lee Co.; J. H. Stewart, Quincy, Adams Co.; W. A. Pennel, Granville, Putnam Co.; J. O. Dent, Wenona, Marshall Co.; M. L. Dunlap, Champaign, Champaign Co.; O. M. Colman, Bloomington, McLean Co.; C. C. Sturtevant, Beardstown, Cass Co.; Jonathan Huggins, Woodburn, Macoupin Co.; Chas. Kennicott, Sandoval, Marion Co.; E. S. Hull, Alton, Madison Co.; T. J. Evans, South Pass, Union Co.

*Cor. Secretary*—W. C. Flagg, Moro, Madison Co.

*Rec. Secretary*—C. W. Murtfeldt, Rockford, Winnebago Co.

*Treasurer*—Chas. Dimmock, Alton, Madison Co.

*Executive Committee*—G. W. Minier, Smiley Shepherd and O. B. Galusha.

**Skaneateles Farmers' Club.**—At the annual meeting of this Society, held on the 2d inst., the following named officers were elected for the ensuing year:

*President*—DOR AUSTIN.

*Vice Presidents*—Alford Lamb, C. C. Wyckoff.

*Recording Sec'y*—Chauncey B. Thorne.

*Corresponding Sec'y*—Wm. R. Willets.

*Treasurer*—Wm. J. Townsend.

*Directors*—Wills Cleft, Geo. Austin.

*Directors holding over*—Squire M. Brown, Wm. E. Clark, John Davey, Jacob H. Allen.

**Exports of Agricultural Products.**—The following table shows the exports of the principal kinds of domestic produce from New-York, in the last three years:

	1861.	1862.	1863.
Wheat flour, bbls.,	3,110,646	2,961,518	2,527,338
Rye flour, bbls.,	11,807	8,397	5,461
Corn meal, bbls.,	108,395	132,606	140,561
Wheat, bushels,	28,889,914	25,564,755	15,424,889
Rye, bushels,	1,000,405	1,104,549	416,369
Oats, bushels,	160,825	210,669	126,556
Barley, bushels,	3,927	42,061	52,439
Peas, bushels,	139,284	113,619	110,911
Corn, bushels,	12,456,265	12,020,848	7,533,431
Cotton, bales,	152,562	24,400	13,945
Hay, bales,	15,776	46,674	19,986
Hops, bales,	28,377	33,409	25,409
Pork, bbls.,	116,654	171,302	192,303
Beef, bbls.,	29,013	32,977	41,632
Beef, tierces,	33,924	27,765	62,868
Cut meats, lbs.,	60,565,732	145,102,758	183,519,060
Butter, lbs.,	23,159,391	30,603,235	23,060,799
Cheese, lbs.,	40,141,225	39,200,439	40,731,168
Lard, lbs.,	47,290,403	126,651,091	120,881,862
Tallow, lbs.,	25,820,335	43,866,920	43,487,731
Tobacco, crude packages,	116,598	113,575	107,439
Tobacco, manufact'd, lbs.,	3,152,484	1,598,044	3,542,210

## Inquiries and Answers.

**Water Lime.**—I wish to ask through THE CULTIVATOR, what is the difficulty with water lime? Has it become an object of adulteration also? I as well as many others have had great difficulty in having it set quick as formerly. What is the matter, and who is in that trade? J. M. McCa. Cass Co., Mich. [Water lime varies greatly in quality in different localities, as it is impure lime, being mixed with alumina and other substances, which give it its peculiar character; the quality of the cement varies with the proportion of these ingredients, making a good or bad mortar. The Rosendale Cement is one of the best in market, but there are others occasionally to be met with that are equally good—the best test is trial. Use such as hardens to the character of stone, and avoid such as does not. Some good sorts are long in hardening, but ultimately become perfect.]

A clean, sharp sand is indispensable, and some good cements fail because the sand is impure or bad. In other cases, the lime is kept on hand too long. We have seen cement made of the best Rosendale lime, mixed with white quartz broken to small grains, that hardened so perfectly in a few years as to remain entirely uninjured and show the trowel marks, when water was repeatedly frozen and thawed in contact with it.]

**Grain Separator.**—I am one of your Quebec subscribers and take the liberty of troubling you to ask if you know of a machine which will separate buckwheat from barley, and if so, please write to me as above, with the name of maker, his address, and if you have it, the price of the machine. A. D. R. [These two grains being nearly of equal size, a common sieve will not separate them, but the barley grains being much the longest, Nutting's fanning mill, with sieves of proper form, will accomplish the work. These sieves are made very smooth by being pressed between rollers, and the grain sliding but not dropping on them, remains in a horizontal position, so that they will not drop through orifices as large as their own diameter, but slide over them. Hence oblong openings in the sieves will separate oats from barley and barley from buckwheat. This fanning mill is not now in market that we are aware of, but there may be others on a similar principle that will answer the purpose.]

**Draining.**—Is there any way of draining a meadow that has no outlet? Would the attempt to sink a well to running water, and turn the drains into it, be successful? A SUBSCRIBER. [Water cannot be made to run up hill, and unless our correspondent can find some lower place to carry the water to, he cannot drain his wet land. Where there is dry gravel or cavernous rock beneath, which can only be known by trying the experiment or by knowing the character of the rocks, sinking a well will answer the purpose. This is not, however, often the case.]

**Granary.**—I will be greatly obliged to you for a plan or any information you can give, as to the best mode of building a granary—suitable say for a well cultivated farm of 250 acres. D. T. MORGAN. Washington, Pa. [It is best to construct the granary in the barn where the grain is stored and thrashed. On page 140 and 142 of the ILLUSTRATED ANNUAL REGISTER for 1862, will be found plans of barns with granaries for this purpose—the thrashing floor being directly over the granary, the grain passes from the fanning-mill into the bins without any labor whatever. Bins, when thus made to be filled from above, possess another important advantage—they are high enough to allow the bottom to be made hopper-shaped, and a foot above the floor, so that the last pint of grain may be drawn from them through a slide into the half bushel beneath. All granaries should have a scale marked on the side; so as to show the number of bushels contained at any height. The required contents of a granary may be estimated by figuring on the probable amount of grain crops, or the amount to be stored at any one time, and then allowing 2,150 cubic inches per bushel; or ascertain the number of cubic feet in the proposed granary, and multiply them by 45 and divide by 56, which will give the number of bushels.]

**Marl as Manure.**—I wish to inquire into the merits of marl as a manure? Would it pay to sow it on winter wheat or clover? The quantity per acre? The soil is sandy. This marl if burned would make good lime. J. E. M. Whitley Co., Ind. [Marl is beneficial to most soils. To those already containing enough carbonate of lime, it is, of course, useless, but there are very few such soils. Hence, as a general rule, it is a useful ap-

plication, and sometimes very valuable. Its effects may not be visible on the present crop of winter wheat, but it can do no harm to apply it, and perhaps it may be very useful, if finely and evenly spread. Its effects would probably be more visible on the clover. The quantity may be from one hundred to two or three hundred bushels per acre. Where it is used, stable or yard manure must not be neglected.]

**Manure from Tanneries.**—I should like to have your opinion as to the value as manure of the product of a tannery—the spent bark, new and old—the hair from the hides, and lime from the vats. I should have known the above from reading your paper, but if we remember all we read, we would soon be as wise as the printer, which is not to be allowed. DUNBAR. [Fresh tan-bark is not adapted to manuring land; after years of decay it becomes vegetable mould, and, like other decayed vegetable matter, tends to loosen heavy soils, to render light soils more retentive of moisture, and affords manure of moderate value where there is already a deficiency in vegetable matter. Hair constitutes a highly concentrated manure. The lime from the vats is useful on such soils as are benefited by the application of carbonate of lime or slaked lime.]

**Oil Cake for Ewes.**—E. L. Holden (see CO. GENT. page 412) may feed oil cake meal to his ewes with perfect safety. I fed it to breeding ewes for a number of years, and thought nothing I ever fed made such good lambs, or so much wool. I also feed some to my cows every spring. I answered a letter from Pennsylvania a few days ago, asking about feeding oil cake meal to breeding ewes. Now all who read this need make no farther inquiry of me, as I never fed anything that gave me more satisfaction, and when it don't cost more than corn it is better to sell the corn and buy oil meal, although for fattening cattle or sheep I don't know but it may be better to feed half oil meal and half corn meal; but, as I have often written, I think buckwheat a good substitute for oil meal to mix or alternate with corn. Oil meal keeps both cattle and sheep in good health. I am feeding it this year at \$40 per ton—the first I fed (about 25 years ago) I paid \$9 for same quantity. JOHN JOHNSTON.

**Feeding Sheep.**—I would say to O. B. of Maryland (p. 32) that his sheep ought to get fat on a pint of corn per head per day. If the hay is good, grinding the corn would not help him. Perhaps his sheep were in low condition to start in winter. If so, every new beginner will be disappointed who begins fattening any kind of lean stock in winter. Perhaps his sheep are of the hairy native breed with arched backs, and so thin in the breast that one would suppose the fore legs came both from one shoulder. I would as soon think of fattening an oak rail as such sheep. I have a lot of fat sheep; they have half a pound each of corn in the morning, and same quantity of oil-cake meal at 3 P. M.; and cornstalks and barley straw for fodder until two weeks ago I commenced feeding hay. I began feeding the 5th of Dec., and they gained wonderfully. My sheep are 3 and 4 year old merino—not that very greasy kind that looks as if tar was oozing out of their wool all the time. That kind I cannot fatten. JOHN JOHNSTON.

**The "Cashmere" Goat.**—I wish to make some inquiries through the CO. GENT. in relation to the Cashmere or Angola Goats. Has their introduction into this country proved a success? Are they bred in the State of New-York? What is their market value, and what does their fleece sell at per pound? H. M. H. Cattaraugus Co., N. Y. [It is unpleasant to be obliged to insert opinions which may tend to depreciate the property of others, but much better authenticated statements than anything yet published are certainly necessary to prove that these animals are of any immediate value to American farmers. We know of no sales of the fleece in this country on a scale sufficient to justify the high quotations that have appeared, or indeed to establish a price, high or low, upon which any dependence can be placed. If we are wrong, our views are of course open to correction.]

**Churns.**—I think I saw in THE CULTIVATOR some months ago, some inquiry about churns. Now for the benefit of your readers I would say, that after having used, and seen used, several different kinds of churns, I sent and procured one of Henry Holmes of Grafton, Vt., and believe the kind he manufactures entitled to rank in the first class, and very probably the first in the class. It is called "Fyler's Butter-working churn." S. PENNOYER. Dutchess Co., N. Y.

**Scours in Sheep.**—Is there any cure for sheep where they have what is generally called the scours? I have lost several thus early in the winter. I have managed to stop their scouring, but they lose their appetite, grow poor and die. Those I doctored died; those I let alone died. T. H. L.

**THE HUMMING BIRD**—*Trochilus colubris*. LINN.

Although six other species of humming birds inhabit the continent of North America, (Mango Humming Bird, *Lampornis mango*, SWAINS.; Black Chinned Humming Bird, *Trochilus alexandri*, BOURC. & MULS.; Rufous Humming Bird, *Selasphorus rufus*, SW.; Broad-tailed Humming Bird, *Selasphorus platycercus*, GOULD.; Anna Humming Bird, *Atthis anna*, REICHENB.; and Ruffed Humming Bird, *Atthis costae*, REICHENB.) yet this bird is entitled to its name "the Humming Bird," on account of its being the only one that is at all well known to most persons. The others, generally speaking, inhabit the South-western coast of North America, as well as the hotter parts of California and the tropic regions of Mexico. So that this diminutive bird being the only one commonly known or seen in the United States, certainly is entitled to the name of "The Humming Bird," without any fear of confounding it with the other species.

The bird before us is believed to be the smallest bird inhabiting North America. Some of the other species are as small, but none are smaller.

"Tail in the male deeply forked; the feathers all narrow lanceolate acute. In the female slightly rounded and emarginate; the feathers broader, though pointed. Male, uniform metallic green above; a ruby red gorget with no conspicuous ruff; a white collar on the throat; sides of body greenish; tail feathers uniformly brownish violet. Female without the red on the throat; the tail is rounded and emarginate, the inner feathers shorter than the outer; the tail feathers banded with black, and the outer tipped with white; no rufous or cinnamon on the tail in either sex. Length 3.25; wing 1.60; tail 1.25; bill .65."

The Humming Bird arrives in the Middle States about the last of April or the beginning of May. After remaining for a week or two it begins to build its nest. This is usually built on an old, mossy branch, and instead of being built between the forks of a twig, as most nests are, is glued on by the saliva of the bird to the top of the branch. It is composed of such lichens as are usually found growing on old fences, and trunks of dead trees, &c., and inside of these, matted and weaved together in a wonderful manner, are pieces of old weeds, such as mulleins, &c. Inside it is lined with down from mulleins, and sometimes from thistles. In it are deposited two eggs, never more or less. They are pure white, and of a perfect oval shape. There is no small or large end to them. They measure  $\frac{1}{2}$  an inch in length, and a little over  $\frac{1}{4}$  of an inch in breadth.

It was formerly supposed that the Humming Bird lived entirely on the honey which it sucked from the flowers. WILSON, however, proved by dissecting quite a number, that they lived on very small insects also. Indeed the latter were in most cases the main food found in their stomachs.

The Humming Bird is one of those birds which are universally beloved, and one of the few which have escaped the imputation of doing harm to agriculture. I suppose it was only on account of their being too small to swallow a grain of wheat, that this happened, for some people are so ignorant as to suppose that birds do more harm than good! There will be a day, I hope, when such may see their folly.

J. P. NORRIS.

**APPLES FOR STOCK.**

I wish to set out an apple orchard the coming season, with a view solely to feeding, but I am at a loss what varieties to set out as being the most profitable for that purpose. Of course I want annual and prolific bearers, both sweet and sour. I want early, fall and winter varieties. If you will, through the COUNTRY GENTLEMAN, enlighten me upon this matter, you will oblige

DELOS H. ROBINSON.

As our correspondent has not given his locality, our list may not be adapted to his region. Sweet apples are generally preferred, but we are not sure that rich sub-acid ones are not as good. The Golden Sweet is excellent for early autumn, Haskell's Sweet or Corlies' Sweet for late autumn, and Danvers' Sweet for winter. The Munson Sweet is an excellent and productive autumn variety, but perhaps not compact enough for stock feeding. The High-Top Sweeting is a very productive early sort at the West. In some localities the Wing Sweeting, a very rich apple and good keeper, affords fine crops. Very productive winter sweet apples, exclusively for stock, have not received sufficient attention. As a sub-acid winter apple for this purpose, nothing perhaps will excel the Baldwin. Heavy bearers cannot be expected to give large crops every year.



THE HUMMING BIRD.

There are terrible trials from which the feeble come out infamous, and the strong sublime.

## WHAT WE HAVE SEEN.

*We have seen* fertile fields disfigured by hedge rows of briars, thistles and other noxious weeds; *we have seen* the same things in many places along the roadsides in utter defiance of the law of the land as well as of the common law of self-preservation, for it is vain to expect exemption from damage to our crops from these pests, if we allow their seed beds to flourish in such close proximity to them.

*We have seen* leached ashes in great quantity applied to the novel purpose of road making, the owner, from the appearance of the neighboring fields, obviously in blissful ignorance of the fact that the same leached ashes are charged with highly fertilizing properties and they have a mechanical as well as a chemical action upon the soil most beneficial.

*We have seen* barnyards encumbered with masses of manure, wasting under the influence of summer rains and summer heat, which should have been applied to the spring crops.

*We have seen* poor crops, poor cattle, bad plowing, fences in a condition to invite even orderly cattle to trespass, and farm houses and barns in a state of dilapidation not at all creditable to farmers.

These are some of the blemishes which it has pained us to observe, but we are happy to say that they are exception and not the rule, and serve to show in bolder relief the well-fenced and well-tilled fields, where no noxious weed is suffered to grow; commodious barns convenient sheds and yards, good stock, and other agreeable objects, which may be found at the present time in most parts of the country.

*We have seen* a farmer's land impoverished, fences prostrate, stock too many and deteriorated, and the comforts of his household few and with difficulty obtained. The resolution to *improve* called upon his industry to accomplish what his mind had conceived, and we have seen him slowly rise above all the evils of his situation, and place himself where he now stands, upon an equality with his species, and the pride and ornament of his country.

And now look at the man who takes pleasure in his profession, and whose habits are regular, quiet, orderly and industrious—and what *do we see*? Does he confine himself to the scanty supply of manure he formerly made for fertilizing his soil, with the only incidental aids of clover and plaster? No. His inquisitive mind takes the whole range of what reading and reflection have imparted. He vastly increases the offals of his barnyard—he makes the compost heap—he finds the ashes of wood and coal to be eminently serviceable—he uses swamp mud, muck, and weeds, and bone, poudrette and guano, and talks of acids and alkalies, and sets and theorises and reasons upon their qualities and effects with the staidness of the philosopher, and the intelligence of the man of science. We are yet in the infancy of farming. The inquisitive mind seeking knowledge never returns empty; and full as we are of encouragement from the past, we look with increased confidence to the future.

And *we have seen* agricultural publications multiply and improve in character and patronage—and it is our firm conviction that they have added ten per cent. every year to the amount of our agricultural products. Well does the agricultural press deserve public coun-

tenance and support. It excites none of the bad propensities of our nature, but it tends to lessen the wants and the vices of the human family, and to diffuse useful knowledge, increase industry, and promote virtue and happiness. It is scattering the good seed, pure and unmixed, free from cockle, chess or tares—the seed has germinated, and under the fostering care of the husbandman it must continue to grow and to yield an abundant harvest.

C. N. B.

## SOUTH-DOWN SHEEP.

EDS. CO. GENT.—I think I noticed in your paper a year or two since an article on sheep, in which the writer strongly argued that no man, however skillful, or at whatever use of means, could import a flock of first class English sheep and keep up the standard of excellence for any considerable length of time. It would be interesting to learn the experience of those who have imported South-Downs and bred them in this climate long enough to form a correct opinion. However that may be, I am satisfied that my own flock has been improved by purchasing rams of our most successful breeders. I am not quite sure that it is easy to keep up the standard of size, yet I remember very well that I saw at Holmdel, sheep bred by J. C. Taylor, that I thought equal to those he had imported, and about as large for their age. I know it is said that "mere size is a vulgar test of merit," yet I confess to a liking for respectable size, and find no difficulty in raising South-Downs large enough for all practical purposes; sheep that weigh from 125 to 200 pounds, are large enough to handle conveniently at shearing time. It is not hard to raise sheep that will dress 20 or 25 pounds per quarter of superior mutton. There are now people who will pay an extra price for good South-Down mutton, (I write from a little experience in this matter,) and I believe there will be more as soon as the breeders of these sheep come into market with a sufficient number for them to be more generally known. If those who have once tasted the sirloin of a well fattened Devon are convinced that good beef is not dependent on size, I am just as confident that those who are fond of good mutton will find the "ne plus ultra" in a saddle of South Down. These sheep are emphatically the sheep for most of our New-England States. I have repeatedly raised as many as 1½ lambs to each breeding ewe in a flock of 50 or 60. I usually shear about 4 pounds per head of washed wool, sometimes 4½ pounds, and this from a flock composed of a large proportion of ewes. I find no difficulty in selling it at about the common rates for merino and mixed Brighton sheep's wool, and sold this year for 75 cents. When wool is 75 cents and mutton a shilling per pound there are many who are quite interested in sheep husbandry. I always liked to keep sheep; from a boy I have been accustomed to their care, and as a man I love to feed my flock of ewes, handsome, quiet and orderly; in a region of stone walls they give me but little trouble, some profit, and much pleasure; "they know my voice and follow me," and if in farm stock I have any hobby, it is *South-Down sheep*.

Newport, R. I.

THOS. B. BUFFUM.

Society is a strong solution of books. It draws the virtue out of what is best worth reading, as hot water draws the strength of tea leaves.

## VICK'S ILLUSTRATED Catalogue of Seeds and Guide to the Flower Garden for 1864.

My NEW CATALOGUE AND FLORAL GUIDE is now published and ready to send out. It contains accurate descriptions of the leading Floral Treasures of the world, with FULL and plain directions for SOWING SEED, TRANSPLANTING & GENERAL CULTURE. Also a List of Choice Seeds for the

### Vegetable Garden,

with necessary instructions for PLANTING and CULTURE.

My NEW CATALOGUE AND FLORAL GUIDE is a beautiful work of FIFTY large pages, illustrated with TWENTY-FIVE fine engravings and one splendid COLORED PLATE of the DOUBLE ZINNIA. It will be sent, postage paid, to all who apply enclosing 10 cents.

Address **JAMES VICK,**  
Jan 21—w3tm1t. Rochester, N. Y.

### OPORTO VINES FOR SALE.

The Oporto proves hardy in all situations. The wine received the highest premium at New-York State Fair 1863. Strong vines \$2 to \$4 per doz. Enclose red stamp for numerous certificates.

Jan. 21—ew2tm1t. **E. WARE SYLVESTER,**  
Lyons, N. Y.

### WHITE OR HEDGE WILLOW.

**This is the Best Thing in the World**

For live fence. Every farmer should have it. Send for our Circular giving proof of the above.

Agents wanted to introduce the White Willow in all parts of the country. Also wanted Agents to sell COLBY'S PATENT CLOTHES WRINGER, which is the best machine in the market. Liberal inducements to Agents. Circulars sent free. **COLBY BROS. & CO.,**  
Jan. 14—w13tm3t. Waterbury, Vt.

### CHEAP APPLE TREES FOR SALE.

I have about 10,000 Apple Trees, 3 years old, too small to retail, which I will sell for \$3 per 100.

Jan. 7—w4tm1t. **A. M. WILLIAMS,**  
Syracuse, N. Y.

### FOWLS, DUCKS AND GEESE.

We are now prepared to furnish

**WHITE FACE SPANISH,**  
Black Polands, Golden Crested Hamburgs, Silver Spangled Hamburgs, Black, Red and Sumatra Game, Gray Dorkings, Brahma, Cochins Creeper, Dominique Fowls, Rose Comb African, Silver Pencilled and Golden Spangled Bantams,

**ROUEN, AYLESBURY & CAYUGA BLACK DUCKS,**  
**TOULOUSE AND BREMEN GEESE.**

All letters enclosing postage stamp will be punctually attended to.  
Jan. 7—ewow2tm1t. **C. N. BEMENT,** Po'keepsie, N. Y.

### PREMIUM CHESTER COUNTY WHITES.— THOMAS WOOD.

Penningtonville, Chester Co., Pa.,

Continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. April 16—w&mtf.

### BURE BRED BERKSHIRE BOAR FOR SALE.

Dec. 24—w2tm2t. **W. J. PETTEE,** Lakeville, Conn.

**LARGE FARM FOR SALE**—Consisting of 800 acres. 4 miles south of Perrysburg and 12 miles from Toledo. It embraces prairie and timber land. One hundred and sixty acres are under improvement and other portions are partially improved. The soil is very rich, and with a moderate outlay it may be made one of the most productive farms of its size in Ohio, the soil being specially adapted to the growth of Tobacco, Flax and other products requiring a soil of extraordinary fertility. The surrounding country is considerably improved. A good dirt road passes straight from Perrysburg, through the farm, adjoining which are two school houses. Perrysburg being on the navigable waters of Lake Erie, affords a good market for farming products, and good society. The Dayton and Michigan Railroad has a station within 2 miles of the land, from which a half hour by rail will take the passenger to Toledo. Being well adapted to grass, it would make a productive stock farm. If desired by the purchaser, 640 acres, embracing an entire section, and most of the prairie, and all of the improvements, would be sold by itself. Terms \$5,000 on giving possession, and balance on long time, if desired, at 6 per cent. The whole tract would be sold at \$15 per acre, or the section by itself at \$18 per acre.

Oct. 22—w&mtf. **SCOTT & ROSS,** Real Estate Agents,  
132 Summit-St., Toledo, Ohio

## FLOWER SEEDS, DELAWARE GRAPEVINES, Flowering Plants, &c., in Variety, SENT BY MAIL.

Catalogues gratis. Address  
Jan. 1—mtt—Feb. 4—w9t.

**H. B. LUM,**  
Sandusky, O.

## RURAL ADVERTISER, OF EIGHT QUARTO PAGES.

A MONTHLY PUBLICATION, DEVOTED TO

## AGRICULTURE. HORTICULTURE, AND RURAL ECONOMY.

At 25 Cents per annum, payable in advance. Published by  
**PASCHALL MORRIS,** 1,120 Market-St., Philadelphia.  
Where subscriptions will be received. Sept. 24—w&mtf.

TO CHEESE MAKERS!

## RALPH'S PATENT IMPROVED "ONEIDA CHEESE VAT."

Was awarded the FIRST PREMIUM by competent judges, after a thorough test of merit, at the New-York State Fair 1862. It is the most simple, durable and effective cheese making apparatus in use. Is used in dairies of 10 to 1,000 cows. The only vat well adapted to "factory" cheese-making. More economical in use than steam, and much less expensive in cost.

We have on hand, ready for delivery, all sizes, varying from 84 to 600 gallons.

Circulars containing description, size and price list, and directions or using, sent on application to

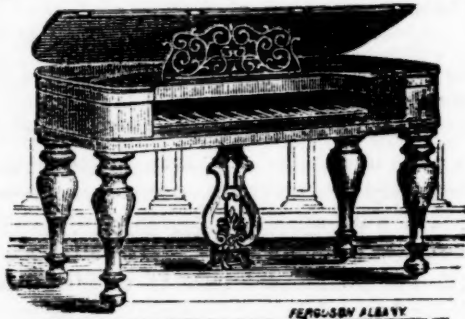
**WILLIAM RALPH,** **WM. RALPH & Co.,**  
**JOHN CARTON,** 133 Genesee-St., Utica, N. Y.,  
Manufacturers and dealers—wholesale and retail—in Dairyman's Tools and Implements. Feb. 12—w&mtf.

**\$75 A MONTH.**—Agents wanted to sell Sewing Machines. We will give a commission on all Machines sold, or employ agents who will work for the above wages and all expenses paid. For particulars address **C. RUGGLES & CO.,**  
Dec. 10—w&mtf. Detroit, Mich.

## PREPARE FOR THE HOLIDAYS!

Booksellers, Fancy Goods Dealers, and the public will please remember that there is no other gift which compares with the **CRAIG MICROSCOPE** and MOUNTED OBJECTS, being an endless source of amusement and instruction. Over 200 dozen Microscopes and 700 dozen objects have been sold within a year by the Boston Agent alone. This Microscope, in brass, is mailed, postage paid, for \$2.25; or with six beautiful mounted objects for \$3; or with 24 objects for \$5. In hard rubber, for 50 cents in addition to the above prices. A liberal discount to the trade. Address **HENRY CRAIG,**  
Nov. 5—w&mtf. 335 Broadway, New York.

## BOARDMAN & GRAYS PATENT IMPROVED INSULATED IRON RIM AND FRAME



## PIANO FORTES.

MANUFACTURED BY  
**WILLIAM McCAMMON,**  
(Successor to BOARDMAN, GRAY & Co.)

**Albany, N. Y.**

Send for illustrated price list.

Jan 1—mtf.

**NASH'S PROGRESSIVE FARMER—A**  
Scientific Treatise on Agricultural Chemistry, the Geology of Agriculture; on Plants, Animals, Manures and Soils—applied to practical to agriculture. Price 75 cents. For sale at the office of the COUNTRY GENTLEMAN

## THE CULTIVATOR.

**Thirty-Two Pages—Monthly—Sixty Cents per Year.**

THE THIRTY-FIRST VOLUME OF THE CULTIVATOR, for 1864, should be placed in the hands of every Farmer. For the small sum of Sixty Cents, a volume of 384 pages is obtained, including a wide variety on every subject of Agricultural and Horticultural interest.

THE CULTIVATOR is made up, monthly, from the COUNTRY GENTLEMAN, and this connection between the two journals explains why the publishers are enabled to present in it a much larger amount of matter than will be found in any contemporary of the same price.

TO CANADA SUBSCRIBERS.—Subscribers in Canada who remit in Bills of their own Specie-paying banks, will be supplied at the above prices—the premium on these bills enabling us to prepay American postage. If remittances are made in American bank notes, or from New-Brunswick and Nova Scotia, in the bank notes of those provinces, our terms will be as follows: One copy CULTIVATOR, Seventy Cents—Ten copies CULTIVATOR and REGISTER, (including an eleventh or free copy to the Agent,) \$7—in order to enable us to prepay the American postage under the present regulations of the Department.

### A Premium to Every Subscriber.

The system of clubbing THE CULTIVATOR with the ANNUAL REGISTER OF RURAL AFFAIRS—OF IN EFFECT, PRESENTING EVERY READER IN A CLUB OF TEN OR MORE with a premium book containing 144 pages and 130 engravings, the price of which alone is 25 cents, will be continued as heretofore, and our Terms for 1864 will stand:

ONE COPY OF THE CULTIVATOR..... 60 Cents  
ONE COPY OF THE CULTIVATOR AND REGISTER..... 85 do.  
TEN COPIES OF THE CULTIVATOR AND REGISTER..... \$6.00

For the contents, &c., of the ANNUAL REGISTER for 1864, see the Advertisement already published.

### Premiums to Agents.

1. For a club of Ten subscribers to THE CULTIVATOR and REGISTER accompanied by the cash (\$6.00)—one extra copy of both to the Agent.
2. For a club of Twenty subscribers to THE CULTIVATOR and REGISTER, accompanied by the cash (\$12) a free copy of the COUNTRY GENTLEMAN, one year to the Agent.
3. For a club of Thirty-Five subscribers to THE CULTIVATOR and REGISTER, accompanied by the cash (\$21) a free copy of the COUNTRY GENTLEMAN, one year, to the Agent, together with a complete set of the ANNUAL REGISTER for Ten Years—with about 1,200 pages of reading matter, and 1,500 engravings.
4. For a club of Fifty subscribers to THE CULTIVATOR and REGISTER, accompanied by the cash (\$30) we will pay a Cash Premium of Five Dollars.
5. For the Largest Number of Subscribers for THE CULTIVATOR and REGISTER received from any person not awarded prizes as above, up to the 1st day of March next, accompanied by the cash at 60 cents each, a Cash Premium of Twenty-Five Dollars.
6. For the 2d Largest Number of Subscribers received as above, a cash premium of Twenty Dollars.
7. For the 3d Largest Number of Subscribers, as above, a cash premium of Fifteen Dollars.
8. For the 4th Largest Number of Subscribers, as above, a cash premium of Ten Dollars.

\*. THE PREMIUMS offered in the above List, from Nos. 2 to 8 inclusive, it will be understood are in lieu of any extra copies of the CULTIVATOR and REGISTER. Those who prefer, will be entitled to a Premium Copy of THE CULTIVATOR and REGISTER for every Ten Subscriptions accompanied by the cash, at 60 cents each.

\*. In competing for these Premiums, a subscriber to the COUNTRY GENTLEMAN at \$2 per year will receive the ANNUAL REGISTER, and will count to the Agent's credit for Three CULTIVATOR subscribers; if club price is paid for the COUNTRY GENTLEMAN (\$1.50 for the paper alone, or \$1.65 for the paper and REGISTER) it will count for Two CULTIVATOR subscribers on the Premium List.

DIRECTIONS TO AGENTS.—Those competing for premiums will be careful to NUMBER THE SUBSCRIBERS they send in, thus—1, 2, 3, and so on, so that additions to the list from time to time may show at a glance the number reached. This prevents any misapprehension, and unless it is done, we cannot be responsible for any failure to credit competing subscriptions to the proper party.

SPECIMEN NUMBERS of both the COUNTRY GENTLEMAN and THE CULTIVATOR will be sent on application—also Show bills and Prospectuses for the New Year.

Address LUTHER TUCKER & SON,  
Albany, N. Y.

## THE COUNTRY GENTLEMAN.

**Sixteen Quarto Pages—Weekly—Two Dollars per Year.**

THE COUNTRY GENTLEMAN is thought to possess claims upon the attention of every Practical Farmer, as well as of the Stock Breeder and Horticulturist, which no other Periodical of its class presents. In the full discussion of the various questions in which the Farmer is concerned, whether directly practical, scientific or legislative in their character, it has no rival. In the number of its contributors, among those who are themselves cultivators of the soil, breeders and horticulturists, and who thus write directly from their own experience, we believe it to be unequalled. In the variety of its Departments, to which there is more or less space devoted in every volume, and in nearly every number, it contains something that is valuable and interesting to all—a variety to be found in no other Weekly journal—including:

1. ALL THE CROPS AND PROCESSES of Improved Farming.
2. DOMESTIC ANIMALS—Breeds, Diseases, and Management.
3. THE DAIRY—the POULTRY YARD and the APIARY.
4. HORTICULTURE—and Landscape Gardening.
5. KITCHEN and FLOWER GARDENING.
6. PROGRESS OF AGRICULTURE—Sales and Shows; New Implements and Inventions.
7. RURAL ARCHITECTURE—DOMESTIC ECONOMY—ENTOMOLOGY.
8. THE FIRESIDE—Natural History; Miscellany.
9. RECORD OF THE TIMES—State of the Crops; News.
10. FARM PRODUCT MARKETS.

THE COUNTRY GENTLEMAN contains sixteen large pages every week, and forms two volumes per year of 416 pages each—subscription \$2 per year, or \$2.50 if not paid strictly in advance. The volumes begin with January and July.

### Terms to Clubs.

OUR TERMS for 1864 will remain substantially as during the past year—where the order is accompanied by Cash in advance:

#### THE COUNTRY GENTLEMAN ALONE.

One copy.....	\$2.00
Three copies.....	6.00
Five copies.....	8.00
Ten copies.....	16.00

#### COUNTRY GENTLEMAN AND ANNUAL REGISTER.

One copy.....	\$2.25
Two copies.....	4.00
Five copies.....	9.00
Ten copies.....	16.50

And any larger number at the same rates.

In a club of Ten or more subscribers, if so desired, those not wishing the ANNUAL REGISTER may remit \$1.50 each—those wishing it \$1.65 each. Clubs may go to as many different post-offices as necessary.

CANADA SUBSCRIBERS will add to the above terms of the COUNTRY GENTLEMAN, twenty-five cents per copy per year for American postage when the subscription is paid in American currency. So long, however, as the present rates of exchange continue, we shall make no extra charge for postage to Canadian subscribers who remit to us in bills of their own specie paying banks.

### To Subscribers at Two Dollars per Year.

1. Decidedly the most valuable invention we know of for readers of such a journal as the COUNTRY GENTLEMAN, is JACOB'S PORTFOLIO FILE, in which the papers are inserted from week to week, as they are issued, and which preserves them in excellent order for constant reference, and fully equal to a bound volume at the close of the year. The retail price of this Portfolio or Cover, is \$1. We have made arrangements by which we can now offer

#### Ten Copies of the Country Gentleman and Ten Portfolio Files for \$20.

Thus in effect giving each reader the means of rendering his paper of DOUBLE VALUE, by having it always at hand and in order. The Portfolio Files must be sent by express at the expense of the club, and if put into one package, the cost of transportation will not be large. \*.\* If it is impossible to make up a FULL CLUB under this offer, subscribers at ordinary club rates may obtain single copies of the File, by adding 75 cents each to their remittances when the club money is sent on.

2. For FIVE subscribers to the COUNTRY GENTLEMAN, sent at one time, with \$10, we will present a copy of the ANNUAL REGISTER for 1864, to EACH SUBSCRIBER, and to the person sending them, a copy of "My Farm of Edgewood," postpaid, a new and very interesting book by DONALD G. MITCHELL, containing many suggestions of practical value.

3. Any subscriber who sends TWO NEW NAMES at the same time with his own, (and \$6.) shall receive the ANNUAL REGISTER for each of the three, and one COUNTRY GENTLEMAN PORTFOLIO FILE for himself.

## CONTENTS OF THIS NUMBER.

## THE FARM.

Seasonable Hints for the Farmer, .....	42
Chicory Culture in New-Hampshire, by S. C. PATTEE, .....	43
Culture of Teasels, by S. E. TODD, .....	44
Oxen for Farm Teams, by F., .....	44
Wheat for a Barrel of Flour, .....	45
Profitable Corn Crop, How Raised, &c., by F. G., .....	46
Value and Protection of Manures, by S. E. TODD, .....	47
Products of a Wisconsin Farm, by L. L. FAIRCHILD, .....	47
New-York and Ohio Agricultural Reports, .....	51
Draining Swamp Lands, by THOS. MESSENGER, .....	52
Culture of the Hop, by D. B. SHAPLEY, .....	53
Shade Trees on Highways, by ANTI, .....	53
The Canada Thistle, .....	56
FOREIGN NOTICES.—Value of Feeding Materials—Helps and Hindrances of Agricultural Progress—Manure Management—Premium Turnip Crop—Steam Cultivation—Feeding Values of Grain, &c., .....	58
My Potato Crop, how Managed and the Result, by D. B. SHAPLEY, .....	60
Sowing Corn for Fodder, by J., .....	60
Dent Corn in Connecticut, by M. A., .....	61
Book-Keeping for Farmers, by HIRAM WALKER, .....	61
Agricultural Societies, .....	63, 66
Notes for the Month, .....	64
Inquiries and Answers, .....	67
What we have Seen, by C. N. B., .....	69

## THE GRAZIER AND BREEDER.

Winter Feeding and Care of Sheep, .....	41
Oil Cake and Cotton Seed for Sheep, by E. R. ANDREWS, .....	43
Tagging Sheep, by Z. E. J., .....	45
Making Beef and Mutton in Winter, by S. E. TODD, .....	47
The Production of Sexes at Will, .....	50
Cooking Feed for Stock, .....	50
Importation of Cattle into Canada, .....	53
Increased Precocity of Improved Breeds—The Devons, .....	58
Stanchions vs. Cattle Ties, by W. J. PETTEE, .....	60
Notes on Sheep, Swine, &c., by J., .....	61
South-Down Sheep, by THOS. B. BUFFUM, .....	69

## HORTICULTURAL DEPARTMENT.

Vicar of Winkfield Pear, .....	54
Raising Small Fruits—Cuttings, &c., .....	56
Dressing for Strawberries—Covering Seed, .....	57
Protection to Orchards and Gardens, by H. P. B., .....	59
Distance for Dwarf Pear Trees, .....	62
Answer to Inquiry about Dwarf Apples, .....	62
Rhubarb or Pie Plant, by H. P. B., .....	63
Best Apples for Stock, .....	68

## THE DAIRY DEPARTMENT.

How to Make Yellow Butter in Winter, by S. E. TODD, .....	43
Cheese Manufacturers' Convention at Rome, .....	48
Hon. Z. Pratt's Dairy for 1863, .....	54

## ENTOMOLOGY.

The Hop Plant Louse, by TOWNEND GLOYER, .....	49
---	----

## THE POULTRY YARD.

Heavy Turkeys, .....	51
----------------------	----

## DOMESTIC ECONOMY.

Japanese Frizzled Bantams, by C. N. BEMENT, .....	60
Manufacture of Chinese Sugar Cane Syrup, by J. FLEMING, .....	53
The Best Way to Preserve Celery, by J. M. CULBERTSON, .....	54
Recipes for Yeast, Cookies and Crullers, by CLARA, .....	54
Repairing Tools in Winter, .....	59

## THE BEE-KEEPER'S DEPARTMENT.

Water for Bees in Winter, by C. J. ROBINSON, .....	55
--	----

## FARM BUILDINGS.

Hints on Horse Stables, .....	57
-------------------------------	----

## BIRDS.

The Humming Bird, by J. P. NORRIS, .....	68
--	----

## ILLUSTRATIONS.

The Teasel, .....	44
Canada Thistle, .....	56
Plants from Cuttings, .....	56
Humming Birds, .....	68
Horse Barn, .....	57
Frizzled Bantams, .....	60
Cattle Ties, .....	60

TO AGENTS AND DEALERS IN  
Trees and Seeds, and to Clubs.

My WHOLESALE CATALOGUE for 1864 is now ready. Carriage of packages paid to Boston, Newport and New-York.

B. M. WATSON,

Jan. 28.

Old Colony Nurseries, Plymouth, Mass.

## SALESMAN WANTED—SALARY PAID.

Apply (with stamps) to  
Jan. 28—w&mt.

HARRIS BROS.

Boston, Mass.

## FRESH GARDEN SEEDS FOR 1864.

Gardeners, Market Gardeners, and others, purchasing seeds in large or small quantities, by sending a list of what they require, will receive the same by return of mail, with the lowest possible prices annexed, for cash. Carriage paid to Boston and New-York. Small quantities prepaid by mail.

B. M. WATSON,

Jan. 28.

Old Colony Nurseries, Plymouth, Mass.

200,000 APPLE PEAR, PLUM,  
Quince, Cherry, Paradise and Mahaleb Stocks, Small Evergreens, &c., at the lowest rates.

R. M. WATSON,

Jan. 28.

Old Colony Nurseries, Plymouth, Mass.

## CHINESE SWAN GEESE.

A few pairs of White and Brown Chinese Geese.

Also Black Cayuga Ducks.

Gray Dorking and Dominique Fowls, if applied for soon.

Apply to C. N. BEMENT.

Feb. 1—w&mt.

Box 65, P. O. Poughkeepsie, N. Y.

## RANDALL'S PRACTICAL SHEPHERD.

## THE PRACTICAL SHEPHERD,

A COMPLETE TREATISE ON

## The Breeding, Management and Diseases of Sheep.

BY HON. HENRY S. RANDALL, LL. D.,

Author of "Sheep Husbandry in the South," "Fine Woiled Husbandry," &c. With illustrations.

This work reached seven editions in less than six weeks from the time of its first publication in October, 1863, and the demand for it is still extraordinary. No volume on any branch of Agriculture or husbandry ever had so rapid a sale, or gave such universal satisfaction. It is cordially welcomed and highly approved by both press and people, being pronounced the BEST WORK ON SHEEP HUSBANDRY ever published in America. The Thirteenth, revised, is now in press.

THE PRACTICAL SHEPHERD is sold only by Agents and the publisher. It comprises 454 large duodecimo pages, and is printed, illustrated and bound in superior style. The uniform price is \$1.50, and it cannot be afforded at a less price for years, if ever. Copies sent by mail, postpaid, on receipt of price. Address

Feb. 1—mltw2t. D. D. T. MOORE, Publisher, Rochester, N. Y.

## TREES AND PLANTS

## Of Every Description,

DECIDUOUS and ORNAMENTAL, in all sizes. My new Price List for 1864 is now ready, Send for it before purchasing elsewhere. Carriage paid to Boston, Newport and New-York.

B. M. WATSON,

Jan. 28.

Old Colony Nurseries, Plymouth, Mass.

1864.

1864.

FOR THE FRUIT, FLOWER AND  
KITCHEN GARDEN.

## THE GARDENER'S MONTHLY,

W. G. P. BRINCKLOE, Publisher,

Office No. 23 North Sixth-Street, Philadelphia, Pa.

Terms—\$1.50 a Year.

## EDITED BY THOMAS MEEHAN.

THE MONTHLY CONTENTS ARE:

HINTS—Flower Garden and Pleasure Ground; Fruit Garden; Vegetable Garden; Window Gardening.

COMMUNICATIONS—Embracing the views of the best writers on Horticulture, Arboriculture, and Rural Affairs.

EDITORIAL—Giving the Editor's views on the important Horticultural improvements.

SCRAPS AND QUERIES—NEW FRUITS—NEW PLANTS—DOMESTIC AND FOREIGN INTELLIGENCE—FOREIGN CORRESPONDENCE—HORTICULTURAL NOTICES.

With each Department handsomely illustrated.

These general features will be retained, and the publisher pledges himself that no labor or expense shall be spared to render the succeeding issues of the Magazine every way worthy of the favor with which his previous efforts have been amply rewarded.

SEND FOR A SPECIMEN. Feb. 1—w&mt.

## FARM FOR SALE.

To be sold—a farm in the town of Schaghticoke, in the county of Rensselaer, situate on the east side of the Hudson River, nearly opposite the village of Mechanicsville, containing about 240 acres in a high state of cultivation, with sufficient timber land for the use of the farm; good and substantial farm buildings; a large orchard of grafted fruit in full bearing, and is well watered. There is also a good water privilege on the farm.

Payments made easy to suit the purchaser.

The farm and buildings lie advantageously for dividing into two farms, and will be sold separately if desired.

Apply to Wm. Vernon on the premises, or to Messrs. Peck, Hillman and Parks, Troy, or to Jacob Y. Kipp, Valley Farm, Schaghticoke.

Feb. 1—w&mt.